

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD AND FINANCIAL NEWSPAPER.

## PROGRESS OF SOUTHERN PORTS.

Conditions at Southern ports compared with those at other ports of the country during the past year are reflected in the following figures of the value of exports in groups of customs districts:

Districts.	1902.	1903.	Increase.	Rate.
Gulf . . . . .	\$282,358,189	\$306,422,527	\$24,064,338	8.5
South Atlantic. . .	190,536,680	201,814,737	11,278,057	5.9
North Atlantic. . .	704,908,078	702,353,593	2,554,685	.3
All others. . . . .	203,916,454	209,547,357	5,630,903	2.7
Total . . . . .	\$1,381,719,401	\$1,420,138,014	\$38,418,613	2.8

Decrease.

Of the \$38,418,613 increase, \$35,342,395 was at Southern ports.

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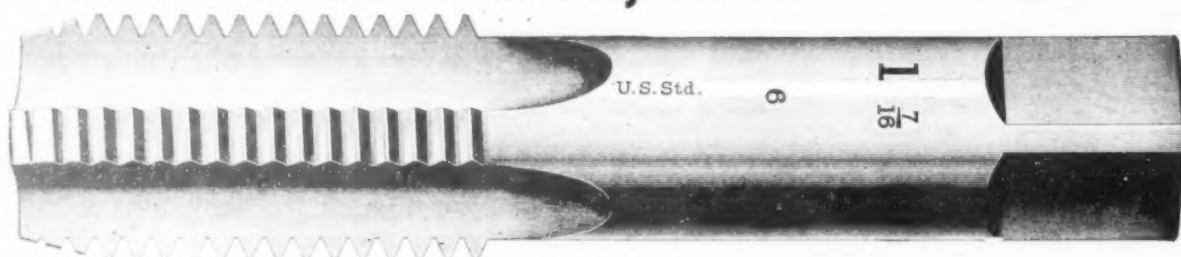
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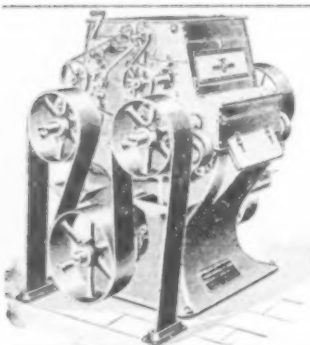
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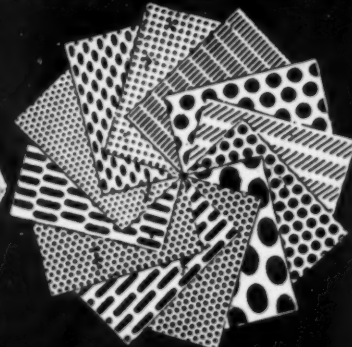
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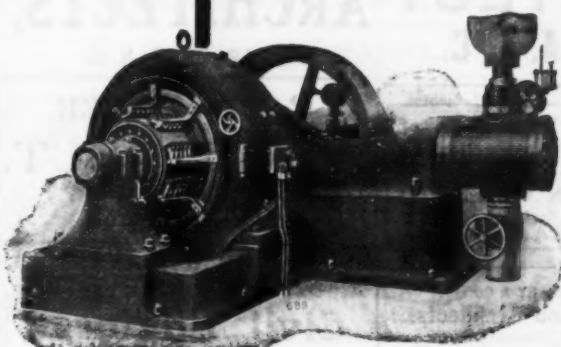
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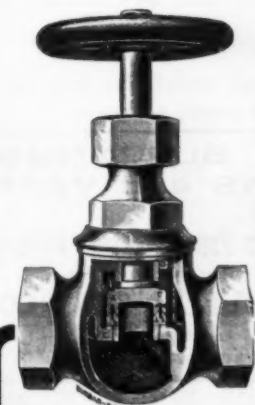
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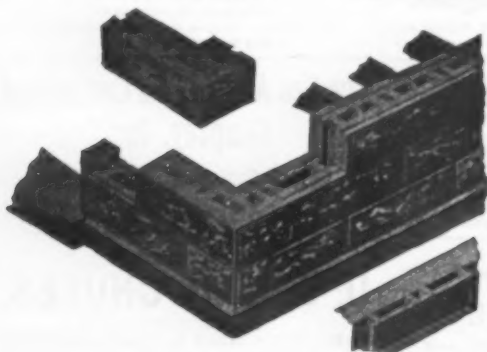
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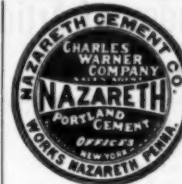
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Caldwell, H. W., & Son Co., Chicago, Ill.  
DeLoach Mill Mfg. Co., Atlanta, Ga.  
Gibbs, W. H., & Co., Columbia, S. C.  
Nordyke & Marmion Co., Indianapolis, Ind.  
Sprout, Waldron, & Co., Muncy, Pa.  
Starr, B. F., & Co., Baltimore, Md.  
Wolf Co., Chambersburg, Pa.

**Fire Scrapers. (For Rollers.)**  
Gem Mfg. Co., Pittsburgh, Pa.

**Forges.**  
Sturtevant Co., B. F., Boston, Mass.

**Foundry Equipment and Supplies.**  
Obermayer Co., S., Cincinnati, O.

**Friction Clutches.**  
Brown, A. & F., New York, N. Y.

**Fuel Economiser.**  
Green Fuel Economiser Co., Mattewan, N. Y.

**Fuel Oil Equipment.**  
Petroleum Iron Works Co., Washington, Pa.  
Rockwell Engineering Co., New York, N. Y.

**Furnace Builders.**  
Kennedy, Walter, Pittsburgh, Pa.  
Means & Fulton Iron Works, Birmingham, Ala.

**Furnaces. (Metallurgical.)**  
Rockwell Engineering Co., New York, N. Y.

**Gages (Recording) and Counters.**  
Amer. Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.

**Galvanized Sheets.**  
American Sheet Steel Co., New York, N. Y.

**Gas Compressors.**  
Bourne-Fuller Co., Cleveland, O.

**Gas Meters.**  
Pittsburg Meter Co., E. Pittsburg, Pa.

**Gas Producers.**  
Wood, B. D., & Co., Philadelphia, Pa.

**Gas and Steam Fitters' Tools.**  
Saunders' Sons, D., Yonkers, N. Y.  
Simmons, John, Co., New York City.

**Gaskets.**  
Boston Belting Co., Boston, Mass.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Pearless Rubber Mfg. Co., New York, N. Y.  
Voorhees Mfg. Co., Jersey City, N. J.

**Gear Cutting Machines.**  
Whitton Machine Co., D. E., New London, Conn.

**Gears and Pinions. (Raw Hide.)**  
National Rawhide & Belting Co., Niles, Mich.

**Gearing.**  
Brown, A. & F., Co., New York, N. Y.  
Caldwell, H. W., & Son Co., Chicago, Ill.  
Case Mfg. Co., Columbus, O.  
Chester Steel Casting Co., Philadelphia, Pa.  
Fairmount Machine Co., Philadelphia, Pa.  
Jeffrey Mfg. Co., The, Columbus, O.  
Greenwald Co., I. & E., Cincinnati, O.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Nordyke & Marmion Co., Indianapolis, Ind.  
Taylor Iron & Steel Co., High Bridge, N. J.  
Tompkins, D. A., Co., Charlotte, N. C.  
Woods, T. B., Sons, Chambersburg, Pa.

**Geologists.**  
Cattlett, Chas., Stanton, Va.  
Froehling & Robertson, Richmond, Va.

**Governer. (Water Wheel.)**  
Beaupre Governor Works, Akron, Ohio.

**Graphite.**  
Detroit Graphite Mfg. Co., Detroit, Mich.  
Dixon Crucible Co., Jos., Jersey City, N. J.  
Internat'l Acheson Graphite Co., Niagara Falls, N. Y.  
Obermayer, S. Co., Cincinnati, O.  
Wisconsin Graphite Co., Pittsburgh, Pa.

**Grates and Grate Bars.**  
McClave-Brooks Co., Scranton, Pa.  
Miller Oil & Supply Co., Indianapolis, Ind.  
Sanford-Day Iron Works, Knoxville, Tenn.

**Grain Elevator Supplies.**  
Caldwell, H. W., & Son Co., Chicago, Ill.  
Case Mfg. Co., Columbus, O.

**Jeffrey Mfg. Co.,** Columbus, O.

**Link-Belt Engineering Co.,** Hicestown, (Phila.) Pa.

**Grenase. (Lubricating.)**  
Cook's Sons, Adam, New York, N. Y.  
Robinson, Wm. C., & Son, Baltimore, Md.

**Grinding and Polishing Machinery.**  
Abrasive Material Co., The, Philadelphia, Pa.  
Carborundum Co., The, Niagara Falls, N. Y.  
Monarch Emery & Corundum Wheel Co., Camden, N. J.  
Norton Emery Wheel Co., Worcester, Mass.  
Vitrified Wheel Co., Westfield, Mass.

**Groovers.**  
Huther Bros., Rochester, N. Y.  
Smith, H. B., Machine Co., Smithville, N. J.

**Gunpowder.**  
Peters Cartridge Co., Cincinnati, O.

**Hammers. (Steam, Power, Pneumatic.)**  
Rand Drill Co., New York, N. Y.  
Robinson, J. M., Mfg. Co., Cincinnati, O.  
Savannah Locomotive & Car Works, Savannah, Ga.

**Handle Mch. [See Woodworking Mch.]**  
Fay, J. A., & Egan Co., Cincinnati, O.  
Leland, F. W., Jasper, Tenn.  
Root, B. M., York, Pa.  
Trevor Mfg. Co., Lockport, N. Y.

**Hardware Specialties.**  
Wrightsville Hardware Co., Wrightsville, Pa.

**Hay Tools.**  
Myers & Bro., F. E., Ashland, O.

**Heating Apparatus.**  
American Blower Co., Detroit, Mich.  
Andrews & Johnson Co., Chicago, Ill.  
Boston Blower Co., Hyde Park, Mass.  
Dixie Mfg. Co., Baltimore, Md.  
Downman-Dozier Mfg. Co., Atlanta, Ga.  
Monitor Steam Generator Mfg. Co., Baltimore, Md.  
Peck-Hammond Co., The, Cincinnati, O.  
Sturtevant Co., B. F., Boston, Mass.  
Webster, Warren Co., Camden, N. J.

**Hoisting Machinery.**  
Austin Mfg. Co., Chicago, Ill.

**Byers Machine Co.,** John F., Ravenna, O.

**Case Manufacturing Co.,** The, Columbus, O.

**Contractors' Plant Mfg. Co.,** Buffalo, N. Y.

**Flory, S. Mfg. Co.,** Ranger, Pa.

**Hardie-Tyner Mfg. Co.,** Birmingham, Ala.

**Hayward Co.,** New York, N. Y.

**Hunt Co.,** C. W., West New Brighton, N. Y.

**Jeffrey Mfg. Co.,** The, Columbus, O.

**Koppel, Arthur,** New York, N. Y.

**Link-Belt Engineering Co.,** Philadelphia, Pa.

**Lidgerwood Mfg. Co.,** New York, N. Y.

**Males Co.,** The, Cincinnati, O.

**Maxfield, H. E., & Co.,** New York, N. Y.

**Moyer, J. W., & Co.,** Philadelphia, Pa.

**Rawson & Morrison Mfg. Co.,** Cambridgeport, Boston, Mass.

**Sprague Canning Machinery Co.,** Chicago, Ill.

**Sullivan Machinery Co.,** Chicago, Ill.

**Holists. (Electric.)**  
Pawling & Harnischfeger, Milwaukee, Wis.

**Holists. (Pneumatic, Motor.)**  
Rand Drill Co., New York, N. Y.

**Horse Shoes.**  
Old Dominion Iron & Nail Works Co., Richmond, Va.  
The Diamond State Steel Co., Wilmington, Del.

**Hose.**  
Boston Belting Co., Boston, Mass.  
Eureka Fire Hose Co., New York, N. Y.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Pearless Rubber Mfg. Co., New York, N. Y.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

**Hotels.**  
New St. Charles Hotel, New Orleans, La.

**Hydrants.**  
Glasgow Pipe & Foundry Co., Lynchburg, Va.  
Ludlow Valve Mfg. Co., Troy, N. Y.

**Wood, B. D., & Co.,** Philadelphia, Pa.

**Hydraulic Machinery.**  
American, Chicago, Ill.

**Watson-Stillman Co.,** New York, N. Y.

**Wood, B. D., & Co.,** Philadelphia, Pa.

**Hydraulic Rams.**  
Niagara Hydraulic Engine Co., Chester, Pa.

**Ice-Making Machinery & Supplies.**  
Arolic Mch. Co., Canton, Ohio.

**Barber Mfg. Co.,** A. H., Chicago, Ill.

**Brown-Cochran Co.,** Lorain, O.

**Frick Co.,** Waynesboro, Pa.

**Realy Ice Machine Co.,** Chicago, Ill.

**McWilliams, Joe, & Co.,** Louisville, Ky.

**Remington Machine Co.,** Wilmington, Del.

**Stillwell-Bierce & Smith-Valle Co.,** Dayton, O.

**United Iron Works Co.,** Springfield, Mo.

**Vitler Mfg. Co.,** Milwaukee, Wis.

**Wolf Co.,** The, Fred. W., Chicago, Ill.

**York Mfg. Co.,** York, Pa.

**Incorporators. (Companies.)**  
Delaware Corporation Co., Wilmington, Del.  
Delaware Trust Co., Wilmington, Del.  
District of Columbia Charter Co., Washington, D. C.

**Indicators. (Steam Engines.)**  
Amer. Steam Gauge & Valve Mfg. Co., Jam. Plain, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Scranton Steam Pump Co., Scranton, Pa.

**Industrial Opportunities.**  
Anderson, T. J., Gen'l Pass. Agt., Houston, Tex.  
Athens Chamber of Commerce, Athens, Ga.  
Brinkley Business Men's League, Brinkley, Ark.  
Fort Worth Board of Trade, Fort Worth, Tex.  
Lynchburg Traction & Light Co., Lynchburg, Va.  
Lafourche Progressive Union, Thibodaux, La.  
Old Dominion Land Co., Newport News, Va.  
Bayne, La., C. W. Lyman, Secretary Progressive Union.  
Richards, M. V., L. & T. Agent, Washington, D. C.  
Southern Pacific, Houston, Tex.  
Seaboard Air Line, Portsmouth, Va.  
Sutherland, Howard, Land Agent, Elkins, W. Va.

**Industrial Railways.**  
Hunt Co., C. W., West New Brighton, N. Y.  
Keppel, Arthur, New York City.

**Injectors.**  
Jenkins Bros., New York, N. Y.  
Lunkenheimer Co., Cincinnati, O.  
Ohio Injector Co., Wadsworth, O.  
Penberthy Injector Co., Detroit, Mich.  
Schodefeld, J. S., Sons, Co., Macon, Ga.  
Simmons, John, Co., New York, N. Y.

**Insulated Wire.**  
Electrical Material Co., Baltimore, Md.  
Hazard Manufacturing Co., Wilkes Barre, Pa.

**Insulators. (Glass.)**  
Electrical Material Co., Baltimore, Md.

**Insulator Pins.**  
Electrical Material Co., Baltimore, Md.  
Houston & Liggett, Lewisburg, Tenn.

**Insulator Pin Machinery.**  
Chattanooga Machinery Co., Chattanooga, Tenn.

**Insurance.**  
Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.  
Maryland Casualty Co., Baltimore, Md.

**Iron.**  
Alabama Consol. Coal & Iron Co., Birmingham, Ala.  
American Sheet Steel Co., New York, N. Y.  
Bourne-Fuller Co., Cleveland, O.  
Old Dominion Iron & Nail Works Co., Richmond, Va.

**Iron Breakers.**  
Armstrong, B. S. & Bro., Atlanta, Ga.  
Cox, Jr., Justice, & Co., Inc., Philadelphia, Pa.  
Males Co., Cincinnati, O.

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Watson-Stillman Co., New York, N. Y.

**Kettles. (Steam.)**  
Badger, E. B., & Sons Co., Boston, Mass.  
Petroleum Iron Works Co., Washington, Pa.

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Fay, J. A., & Egan Co., Cincinnati, O.  
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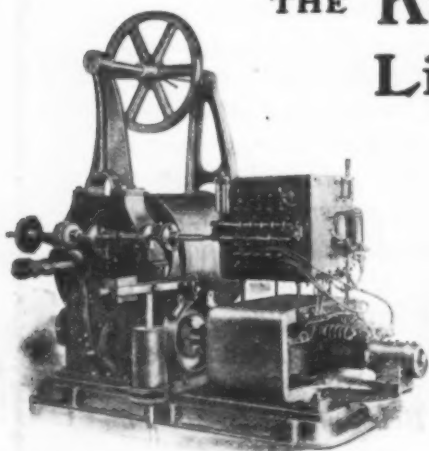
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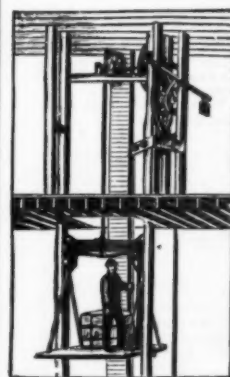
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## Classified Index of Articles Advertised

FOR ALPHABETICAL  
INDEX See Page 30**Knitting Machinery.**

Campbell & Clute Machine Co., Cohoes, N. Y.  
Mayo Knit. Mch. & Needle Co., Franklin Falls, N. H.  
McMichael & Widdon Mfg. Co., Norristown, Pa.  
Nye & Treddick Co., Philadelphia, Pa.  
Scott & Williams, Philadelphia, Pa.

**Lamps.**

Wells Light Mfg. Co., New York, N. Y.  
**Lamps.** (Arc and Incandescent.)  
Alexander, Jr., Co., S. E. Charlotte, N. C.  
Electrical Material Co., Baltimore, Md.  
Electric Supply Co., Savannah, Ga.  
General Electric Co., Schenectady, N. Y.  
Kentucky Electrical Co., Owensboro, Ky.  
New York & Ohio Co., Warren, O.  
Piedmont Electric Co., Asheville, N. C.  
Shelby Electric Co., Shelby, O.  
Standard Electric Co., Norfolk, Va.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
**Lamp & Glass.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.  
**Lamp Replacer.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.  
**Lamp Shades & Guards.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

**Laths.**

Abbott, F. C. & Co., Charlotte, N. C.  
Anderson, T. J., Gen'l Pass. Agt., Houston, Tex.  
Brobst, Fendick & Co., Brunswick, Ga.  
Clark, Chas. E., Augusta, Ga.  
Martin & Bro., Augusta, Ga.  
Richards, M. V., Land & Industrial Agt., Wash., D. C.  
Sutherland, Howard, Land Agent, Elkins, W. Va.  
Watson, R. E., Atlanta, Ga.

**Lathes.**

Barnes, W. F. & J., Co., Rockford, Ill.  
Robinson, W. C. & Son, Co., Baltimore, Md.  
Gibbes, W. H., & Co., Columbia, S. C.  
McCabe, J. J., New York, N. Y.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.

**Laundry Machinery.**

Adams Laundry Machinery Co., Troy, N. Y.  
Dawson, A. L., & Co., Chicago, Ill.  
Sinclair Co., S. H., Chicago, Ill.  
Wilson Laundry Machinery Co., Columbia, Pa.

**Lead.**

Robertson Mfg. Co., James, Baltimore, Md.  
**Lead and Tin.** (Pig.)  
Hertz, Theo., Metal Co., St. Louis, Mo.  
Ryan & Co., J. J., Chicago, Ill.

**Letters.**

Brin, A. W., Seneca Falls, N. Y.

**Lime.**

Carolina Portland Cement Co., Charleston, S. C.  
Maryland Lime & Cement Co., Baltimore, Md.  
Warner, Charles Co., Wilmington, Del.

**Locomotive Builders.**

American Locomotive Co., New York, N. Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Byers, Jno. F., Mch. Co., Ravenna, O.  
Climax Mfg. Co., Corry, Pa.  
Low, Edgar S., Co., Pittsburgh, Pa.  
Males Co., Cincinnati, O.  
Porter, H. E., Co., Pittsburgh, Pa.

**Looms.**

American Supply Co., Providence, R. I.  
**Looms and Weaving Machinery.**  
American Supply Co., Providence, R. I.  
Draper Co., Hopedale, Mass.

**Lubricating Compounds.**

Falmouth Machine Co., Philadelphia, Pa.  
Kilburn, Lincoln & Co., Fall River, Mass.  
Lowell Machine Shop, Boston, Mass.  
Mason Machine Works, Taunton, Mass.  
Tompkins, D. A., Co., Charlotte, N. C.

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**Lubricators and Oil Cans.**  
Cook's, Adam, Sons, New York, N. Y.  
Crosby Steam Gage & Valve Co., Boston, Mass.  
Detroit Lubricator Co., Detroit, Mich.  
Lunkenheimer Co., Cincinnati, O.  
Penberthy Injector Co., Detroit, Mich.

**Lumber.**

Kirby Lumber Co., Houston, Tex.  
Price & Heald, Baltimore, Md.  
Red Cypress Lumber Co., Macon, Ga.  
Sisson Lumber Co., Macon, Ga.

**Machinery.**

Eclipse Mch. Co., Chicago, Ill.  
Leffler, Charles, & Co., Brooklyn, N. Y.  
Moshannon Mfg. Co., Philadelphia, Pa.  
Rosenford Foundry & Machine Co., Rosford, Pa.  
**Machinery and Tools.** (New & Second-hand.)  
Affleck, Geo. E., New York, N. Y.  
American, Chicago, Ill.  
American Elec. Supply & Mfg. Co., New York, N. Y.  
Armstrong, R. S., & Bro., Atlanta, Ga.  
Baird Machine Co., Pittsburgh, Pa.  
Baker, H. C., & Co., Philadelphia, Pa.  
Bennett, G. L., New York, N. Y.  
Bissell, F. Co., Toledo, O.  
Bowen & Street Equipment Co., Norfolk, Va.  
Braden, Jos. S., New York, N. Y.  
Brown & Zortman Machinery Co., Pittsburgh, Pa.  
Caine & Platt, Philadelphia, Pa.  
Carlin Mch. & Supply Co., Allegheny, Pa.  
Casey, D. L., Mch. Co., Springfield, O.  
Chicago House, Freckling Co., Chicago, Ill.  
Cleveland Belling & Machinery Co., Cleveland, O.  
Clyde Mch. Works, Chicago, Ill.  
Columbia Supply Co., Columbia, S. C.  
Columbus Iron & Steel Co., Columbus, O.  
Contractors' Equipment Co., Philadelphia, Pa.  
Contractors' Supply & Equipment Co., Chicago, Ill.  
Cox, Justice, Jr., & Co., Ltd., Philadelphia, Pa.  
Davis, W. F., Birmingham, Ala.  
Driscoll, John T., & Co., Chicago, Ill.  
Ellis, J. L., Co., Oklahoma City, Okla.  
Fidelity Machine & Metal Co., Philadelphia, Pa.  
Girard Machine & Tool Co., Philadelphia, Pa.  
Hanley, Wm., Bradford, Pa.  
Hartfelder-Garbutt Co., Savannah, Ga.  
Hiltner, H. A., Sons, Philadelphia, Pa.  
Huntington Machinery & Supply Co., Wilkesbarre, Pa.  
Kaiser, A. V., & Co., Philadelphia, Pa.  
Kennedy, L. E., & Co., New York, N. Y.  
Kohn, J. W., & Co., Cleveland, O.  
Lehman, Charles T., Birmingham, Ala.  
Lodge & Shipley Mch. Tool Co., Cincinnati, Ohio.  
Lucas, J. C. M., Baltimore, Md.  
Mallory, J. D., Baltimore, Md.  
Menger's Machinery Exchange, Baltimore, Md.  
Pouliet & Co., Philadelphia, Pa.  
Price Machinery Co., Chicago, Ill.  
Rostler, MacGovern & Co., New York, N. Y.  
Saxton, J. C., New York, N. Y.  
Seyferth, L. F., Sons, Philadelphia, Pa.  
Shaw, Willis, Chicago, Ill.  
Stewart, John A., Electric Co., Cincinnati, O.  
Straub Machinery Co., Cincinnati, O.  
Thompson, Son & Co., New York, N. Y.  
Toomey, Frank, Philadelphia, Pa.  
Valdosta Foundry & Machine Co., Valdosta, Ga.  
Waters, John A., & Co., Richmond, Va.  
Wickes Bros., Pittsburgh, Pa.  
Wolf, L., & Bro., Cincinnati, O.  
Wood & Co., Chicago, Ill.

**Machinists' Tools.**

Barnes, W. F. & J., Co., Rockford, Ill.  
Bickford Drill & Tool Co., Cincinnati, O.  
Cincinnati Milling Machine Co., Cincinnati, O.  
Fosdick Mch. Tool Co., Cincinnati, O.  
Greaves, Klusman & Co., Cincinnati, O.  
Landis Tool Co., Waynesboro, Pa.  
McCabe, J. J., New York, N. Y.  
Pratt & Whitney, Hartford, Conn.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.

**Mail Chutes.**

Outler Mfg. Co., Rochester, N. Y.

**Mattresses.**

Perfection Mattress Co., Birmingham, Ala.  
**Mechanical Draft.**  
Allington & Curtis, Saginaw, Mich.  
American Blower Co., Detroit, Mich.  
Andrews & Johnson Co., Chicago, Ill.  
Boston Blower Co., Hyde Park, Mass.  
Dixie Mfg. Co., Baltimore, Md.  
Sturtevant, R. F., Co., Boston, Mass.

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International Mercantile Agency, New York, N. Y.

**Merry-go-Rounds.**

Herschell-Spillman & Co., North Tonawanda, N. Y.  
McIntire, F. C., & Co., Charlotte, N. C.  
Norman & Evans, Lockport, N. Y.

**Metal-Working Machinery.**

Barnes, W. F. & J., Co., Rockford, Ill.  
Bertsch & Co., Cambridge City, Ind.  
Bickford Drill & Tool Co., Cincinnati, O.  
Cincinnati Milling Machine Co., Cincinnati, O.  
Fosdick Machine Tool Co., Cincinnati, O.  
Gibbes, W. H., & Co., Columbia, S. C.  
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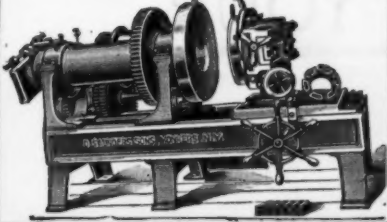
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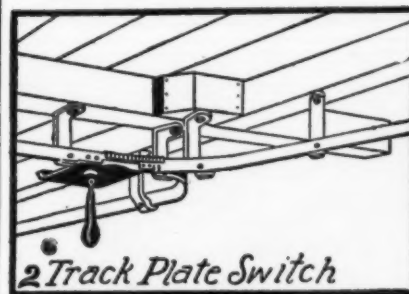
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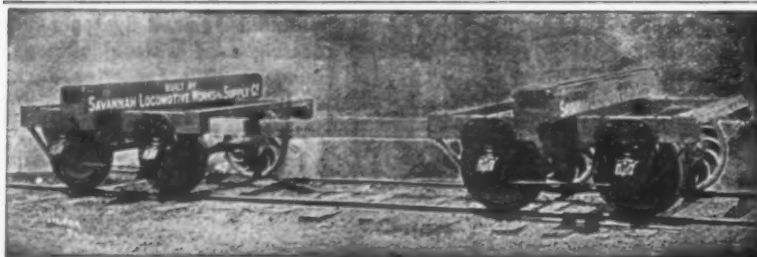


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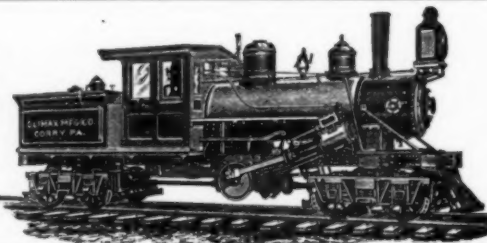
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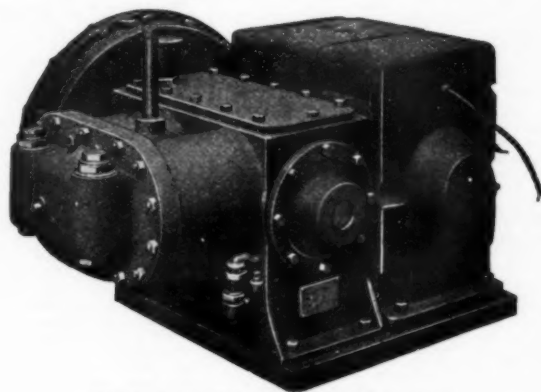
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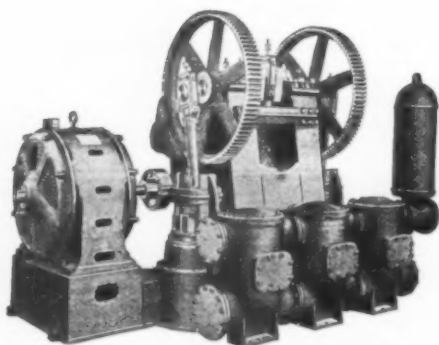
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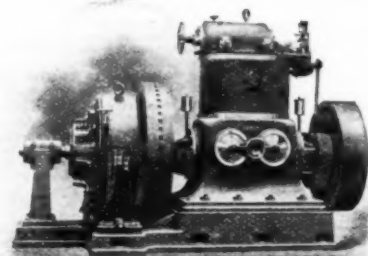
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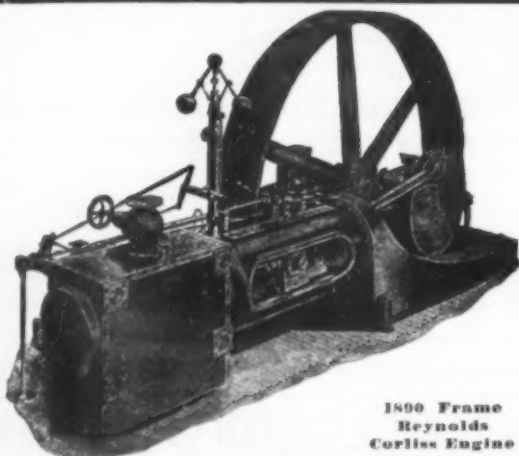
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 Electrical Material Co., Baltimore, Md.  
**Spelter.**  
 Harts, Theo., Metal Co., St. Louis, Mo.  
**Spikes.**  
 The Diamond State Steel Co., Wilmington, Del.  
**Spring.** (Bicycle Saddle, Machinery, Railway and Spiral.)  
 Boston Belting Co., Boston, Mass.  
 Cary Spring Works, New York, N. Y.  
 Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
**Sprinklers.** (Automatic.)  
 Bailey-Lobby Co., Charleston, S. C.  
 General Fire Extinguisher Co., Providence, R. I.  
**Stamp Mills.**  
 Mecklenburg Iron Works, Charlotte, N. C.  
**Standpipes.**  
 Birmingham Boiler Works, Birmingham, Ala.  
 Girard Boiler & Mfg. Co., Girard, O.  
 Harley Boiler Works, Montgomery, Ala.  
 Keeler, E. Co., Williamsport, Pa.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Means & Fulton Iron Works, Birmingham, Ala.  
 Petroleum Iron Works Co., Washington, Pa.  
 Virginia Bridge & Iron Co., Roanoke, Va.  
**Steam Fitters' Supplies.**  
 General Fire Extinguisher Co., Providence, R. I.  
 Maxfield, H. E. & Co., New York, N. Y.  
 McWilliams, Jos., & Co., Louisville, Ky.  
 Simmons, John, Co., New York City.  
**Steam Gages.**  
 American Steam Gauge & Valve Mfg. Co., Jamaica Plain, Mass.  
 Crosby St. Gage & Valve Co., Boston, Mass.  
 Lunkenheimer Co., Cincinnati, O.  
**Steam Heating.**  
 General Fire Extinguisher Co., Providence, R. I.  
 Keeler, E. Co., Williamsport, Pa.  
 Peck-Hammond Co., The, Cincinnati, O.  
 Tompkins, D. A. Co., Charlotte, N. C.  
 Webster & Co., Warren, Camden, N. J.  
**Steam Hoists.** (See Dredge and Excavators.)  
**Steam Traps.**  
 American Blower Co., Detroit, Mich.  
 Gibbs, W. H. & Co., Columbia, S. C.  
 Haines, W. S. Co., Phila., Pa.  
 Sturtevant Co., B. F., Boston, Mass.  
**Steamship Lines.**  
 Baltimore Steam Packet Co., Baltimore, Md.  
 Chesapeake Steamship Co., Baltimore, Md.  
 Detroit & Buffalo Steamship Co., Detroit, Mich.  
 Merchants & Miners' Trans. Co., Baltimore, Md.  
**Steel.** (Manufacturers of.)  
 American Sheet Steel Co., New York, N. Y.  
 Bourne-Fuller Co., Cleveland, O.  
 Chester Steel Castings Co., Philadelphia, Pa.  
 Taylor, N. & G. Co., Philadelphia, Pa.  
 The Diamond State Steel Co., Wilmington, Del.  
**Steel Buildings.** (Designers, Builders.)  
 Frink & Hazen, Baltimore, Md.  
 General Supply & Construction Co., New York, N. Y.  
 Scaife, Wm. B. & Sons Co., Pittsburg, Pa.  
 Schreiber, L., & Sons Co., Cincinnati, O.  
 Va. Bridge & Iron Co., Roanoke, Va.  
**Steel Compressors.** (Automatic.)  
 Latrobe Steel & Coupler Co., Philadelphia, Pa.  
**Stills.** (Turpentine.)  
 McMillan Bros. Co., Mobile, Ala.  
**Stock Certificates.**  
 Middleton, J. W., Chicago, Ill.  
 Myers Printing House, New Orleans, La.  
 National Seal Works, Richmond, Va.  
**Stokers.** (Mechanical.)  
 Westinghouse, Church, Kerr & Co., Pittsburg, Pa.  
 Westinghouse Machine Co., Pittsburg, Pa.  
**Storage Receipts.**  
 Baltimore Fidelity Warehouse Co., Baltimore, Md.  
**Structural Steel and Iron.**  
 Belmont Iron Works, Philadelphia, Pa.  
 Bourne-Fuller Co., Cleveland, O.  
 Chesapeake Iron Works, Baltimore, Md.  
 Eureka Supply Co., Chattanooga, Tenn.  
 General Supply & Construction Co., New York, N. Y.  
 Girard Boiler & Mfg. Co., Girard, O.  
 Scaife, Wm. B. & Sons Co., Pittsburg, Pa.  
 Schreiber, L., & Sons Co., The, Cincinnati, O.  
 Simpkins, Thos. W. & Co., Philadelphia, Pa.  
 Virginia Bridge & Iron Co., Roanoke, Va.  
 Wisconsin Iron & Wire Works, Milwaukee, Wis.  
**Switchboards, Switches, etc.**  
 Electrical Material Co., Baltimore, Md.  
 Standard Electric Co., Norfolk, Va.  
 Western Electrical Supply Co., St. Louis, Mo.  
 Westinghouse Electric & Mfg. Co., Pittsburg, Pa.  
**Tanks.** (Iron and Steel.)  
 Birmingham Boiler Works, Birmingham, Ala.  
 Caldwell, W. E. Co., Louisville, Ky.  
 Flint & Walling Mfg. Co., Kendallville, Ind.  
 Girard Boiler & Mfg. Co., Girard, O.  
 Hammond Iron Works, Warren, Pa.  
 Harry Bros. Co., Dallas, Tex.  
 Harley Boiler Works, Montgomery, Ala.  
 Keeler, E. Co., Williamsport, Pa.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Means & Fulton Iron Works, Birmingham, Ala.  
 Petroleum Iron Works Co., Washington, Pa.  
 Scaife, W. B. & Sons Co., Pittsburg, Pa.  
 Schofield's, J. S., Sons Co., Macon, Ga.  
 Smith Co., S. Morgan, York, Pa.  
 Tallard Steel Pipe & Tank Co., Waterloo, Ia.  
 Tompkins, D. A. Co., Charlotte, N. C.

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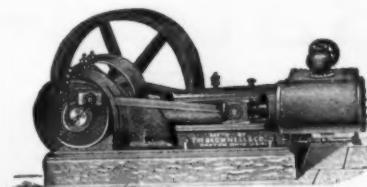


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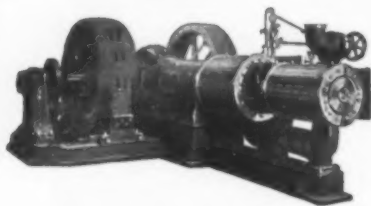
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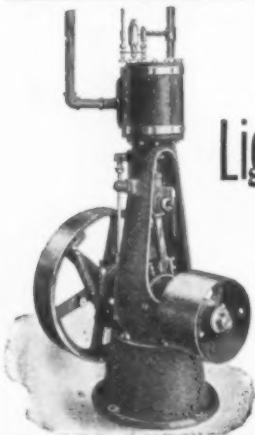


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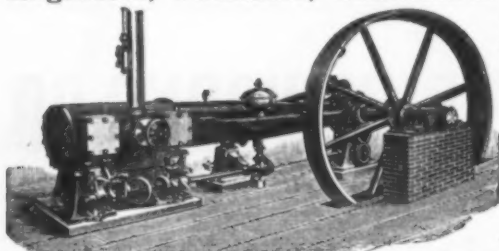
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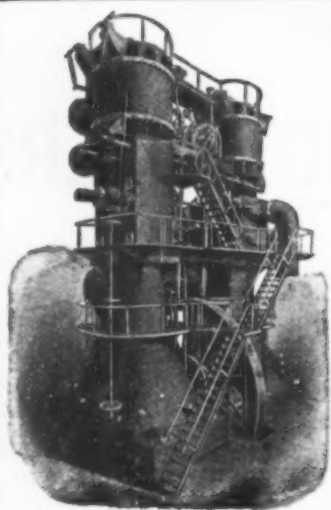


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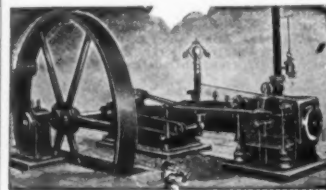


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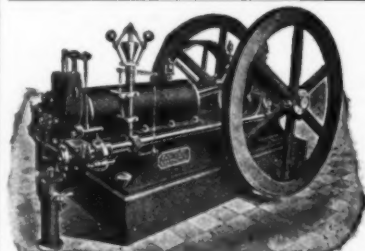
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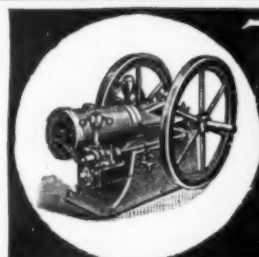


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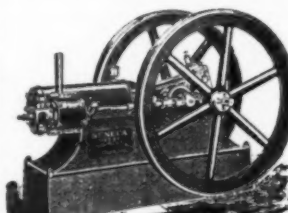
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no experiment; we guarantee as close regulation  
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and they are as good as is possible to make them,  
and sell them as cheap as high-class material and  
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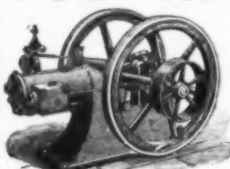
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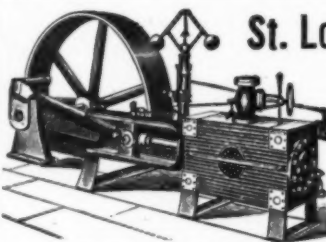


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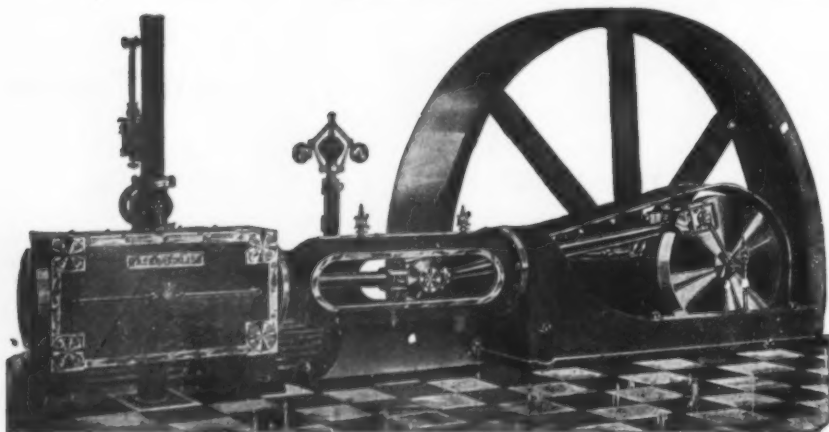
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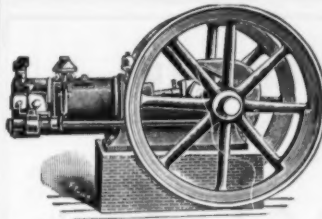


## Classified Index of Articles Advertised

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Valk & Murdoch Iron Works, Charleston, S. C.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Wood, R. D., & Co., Phila., Pa.  
**Tanks.** (Wood.)  
Caldwell Co., W. E., Louisville, Ky.  
Cypress Lumber Co., Apalachicola, Fla.  
Davis, G. M., & Son, Palatka, Fla.  
Lewis, H. F., & Co., Ltd., New Orleans, La.  
Tupelo Tank Co., Mobile, Ala.  
**Tapes.** (Measuring.)  
Larkin Rule Co., Saginaw, Mich.  
**Telephones.** (Supplies, Equipment.)  
Alexander, Jr., Co., S. B., Charlotte, N. C.  
Electric Supply Co., Savannah, Ga.  
Electrical Material Co., Baltimore, Md.  
Piedmont Electric Co., Asheville, N. C.  
Standard Electric Co., Norfolk, Va.  
Western Electrical Supply Co., St. Louis, Mo.  
**Telephone Poles.**  
Electrical Material Co., Baltimore, Md.  
Houston & Liggett, Louisville, Tenn.  
International Erecting & Const. Co., Galveston, Tex.  
**Terne Plate.**  
Merchant & Co., Inc., Philadelphia, Pa.  
Simpers, Thos. W., & Co., Philadelphia, Pa.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Terra Cotta.**  
Pomona Terra Cotta Co., Pomona, N. C.  
Stevens, H., Sons, Co., Macon, Ga.  
**Textile Machinery.** (See Cotton Mill Mach.)  
**Threshers.**  
Farquhar, A. B., Co., York, Pa.  
Cardwell Machine Co., Richmond, Va.  
Gibbes, W. H., & Co., Columbia, S. C.  
**Tin.** (Roofing.)  
American Tinplate Co., New York, N. Y.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Tinplate.**  
American Tinplate Co., New York, N. Y.  
Merchant & Co., Inc., Philadelphia, Pa.  
Simpers, Thos. W., & Co., Philadelphia, Pa.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Tires, Steel.** (Locomotive and Car.)  
Latrobe Steel Co., Philadelphia, Pa.  
**Tobacco Machinery.**  
Buckeye Iron & Brass Works, Dayton, O.  
Cardwell Machine Co., Richmond, Va.  
**Tools.** (Machine.) [See Machine Tools.]  
**Tools.** (Machine.) [See Machine Tools.]  
Barnes, W. F. & John, Co., Rockford, Ill.  
Morris Twist Drill & Machine Co., New Bedford, Mass.  
Folk, A. J., & Son, Millersburg, Pa.  
Pratt & Whitney Co., Hartford, Conn.  
**Tools.** (Pneumatic.)  
Rand Drill Co., New York, N. Y.  
**Tools.** (Tinner's.)  
Niagara Machine & Tool Works, Buffalo, N. Y.  
**Tools.** (For Rev. Rep. Shops.) [See Port. Tools.]  
**Torches.**  
Wall, P., Mfg. Co., Allegheny, Pa.  
Wells Light Mfg. Co., New York, N. Y.  
**Towers.** (Steel and Wood.)  
Caldwell Co., W. E., Louisville, Ky.  
Flint & Walling Mfg. Co., Kendallville, Ind.  
Tompkins, D. A., Co., Charlotte, N. C.  
**Tramway.** (Overhead.)  
Cohoes Iron Foundry & Machine Co., Cohoes, N. Y.  
Meyer, J. W., & Co., Philadelphia, Pa.  
New Jersey Ry. & Mch. Co., New York, N. Y.  
Spindel, J. G., Reading, Pa.  
**Tramway.** (Wire Rope.)  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Caldwell, H. W., & Sons Co., Chicago, Ill.  
Cresson Co., George V., New York, N. Y.  
Flory, S., Mfg. Co., Bangor, Pa.  
Hunt Co., C. W., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Lidgerwood Mfg. Co., New York, N. Y.  
Link-Belt Engineering Co., Nictown (Phila.), Pa.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Trenton Iron Co., Trenton, N. J.  
**Trucks and Drays.** (Hand.)  
Hornor, W. P., Mfg. Co., Danville, Va.  
**Tube Cleaners.**  
Gem Mfg. Co., Pittsburg, Pa.  
**Tubing.**  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
**Tubing.** (Seamless, Brass, Copper & Braided.)  
Waterbury Brass Co., New York, N. Y.  
**Turbines.** (See Water Wheels.)  
**Turbines.** (Steam.)  
Westinghouse, Church, Kerr & Co., Pittsburg, Pa.  
Westinghouse Machine Co., Pittsburg, Pa.  
**Turntables.**  
Koppel, Arthur, New York City.  
Males Co., Cincinnati, O.  
Virginia Bridge & Iron Co., Roanoke, Va.  
**Typewriters.**  
Pittsburg Writing Machine Co., Pittsburg, Pa.  
Smith-Premier Typewriter Co., Baltimore, Md.  
**Typewriter Table Cabinets.**  
Dearborn Desk Co., Birmingham, Ala.  
**Valves.**  
Amer. Sim. Gauge & Valve Mfg. Co., Jam. Plain, Mass.  
Boston Belting Co., Boston, Mass.  
Columbia Supply Co., Columbia, S. C.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
General Fire Extinguisher Co., Providence, R. I.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Jenkins Bros., New York, N. Y.  
Ludlow Valve Mfg. Co., Troy, N. Y.  
Lunkenheimer Co., Cincinnati, O.  
Simmons, John, Co., New York City.  
Vorhees Rubber Mfg. Co., Jersey City, N. J.  
Wolf, Fred, W., & Co., Chicago, Ill.  
Wood, B. D., & Co., Philadelphia, Pa.  
**Veneer Machines.**  
Coe Mfg. Co., The, Palmyresville, O.  
Titus, E. E., Petersburg, Va.  
**Ventilators.**  
Dowman-Dosier Mfg. Co., Atlanta, Ga.  
Merchant & Co., Inc., Philadelphia, Pa.  
**Vices.**  
Reed Mfg. Co., Erie, Pa.  
**Wagon Builders' Mch. & Supplies.**  
Cordeman, Meyer & Co., Cincinnati, O.  
Fay, J. A., & Egan Co., Cincinnati, O.  
**Warehouse.** (Fidelity.)  
Baltimore Fidelity Warehouse Co., Baltimore, Md.  
**Washers.** (One and Phosphate.)  
Bailey-Lobby Co., The, Charleston, S. C.  
Cameron & Barkley Co., Charleston, S. C.  
McLanahan-Stone Co., Hollidaysburg, Pa.

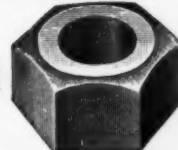
**Watchman's Clocks.**  
Electrical Material Co., Baltimore, Md.  
Imhauser & Co., E., New York City.  
Naus & Co., New York, N. Y.  
Waggoner Watchman Clock Co., Grand Rapids, Mich.  
**Water Power.**  
Roanoke Navigation & Water Power Co., Weldon, N.C.  
**Waterproof Cellar Engineer.**  
Gillbreth, Frank B., Boston, Mass.  
**Water-Wheel Governor.**  
Reologie Governor Works, Akron, O.  
**Water Softening Apparatus.** (Purifying.)  
Scaife, Wm. B., & Sons Co., Pittsburg, Pa.  
**Water-Wheels and Turbines.**  
Davis Foundry & Machine Works, Rome, Ga.  
Lane Mfg. Co., Montpelier, Vt.  
Lefel, James, & Co., Springfield, O.  
Norris, Burnham & Co., Inc., Glen Rock, Pa.  
Rindon-Alcott Turbine Co., Mount Holly, N. J.  
Smith Co., Morgan, York, Pa.  
Stillwell-Bierce & Smith-Valle Co., Dayton, O.  
Westinghouse, Church, Kerr & Co., Pittsburg, Pa.  
Westinghouse Mch. Co., Pittsburg, Pa.  
**Water Meters.**  
Pittsburg Meter Co., Pittsburg, Pa.  
Worthington, Henry R., New York, N. Y.  
**Water-Works Supplies.**  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Pomona Terra Cotta Co., Pomona, N. C.  
Stevens, H., Sons, Co., Macon, Ga.  
U. S. Cast Iron Pipe & Foundry Co., Chicago, Ill.  
Wood, B. D., & Co., Philadelphia, Pa.  
**Weighting Machinery.** (Automatic.)  
Richardson Scale Co., New York, N. Y.  
**Well Contractors.** (Oil, Artesian, etc.)  
Andrews, Perry & Bro., Atlanta, Ga.  
Bacon Air Lift Co., New York, N. Y.  
Cook Well Co., St. Louis, Mo.  
Ford, Isaac H., New York, N. Y.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
**Well Tools and Supplies.**  
Andrews, Perry & Bro., Atlanta, Ga.  
Bacon Air Lift Co., New York, N. Y.  
Cook Well Co., The, St. Louis, Mo.  
Ford, Isaac H., New York, N. Y.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
Kelly & Toneyhill Co., Watertown, Ia.  
Williams Bros., Ithaca, N. Y.  
**Wheelbarrows and Trucks.**  
Jackson Mfg. Co., Harrisburg, Pa.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
**Whistles.** (Chimes, Sirens, etc.)  
Amer. Sim. Gauge & Valve Mfg. Co., Jam. Plain, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Lunkenheimer Co., Cincinnati, O.  
**White Lead.**  
French, Samuel H., & Co., Philadelphia, Pa.  
**Whitewashing Machinery.**  
Hook, F. E., Hudson, Mich.  
Star Brass Works, Chicago, Ill.  
**Windlasses.**  
American Ship Windlass Co., Providence, R. I.  
**Windmills.**  
Flint & Walling Mfg. Co., Kendallville, Ind.  
**Window Guards.** (Wire.) [See Wire Goods.]  
**Wire, Barbed Wire, etc.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
Roebling, J. A., Sons Co., Trenton, N. J.  
**Wire.** (Brass and Copper.)  
Waterbury Brass Co., New York, N. Y.  
**Wire Cloth.** (Iron, Steel, Brass, etc.)  
Buffalo Wire Works Co., Buffalo, N. Y.  
Caldwell, H. W., & Sons, Co., Chicago, Ill.  
Meyers, Fred, J., Mfg. Co., Hamilton, O.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Goods.**  
Boiler Iron & Wire Works, J. E., Detroit, Mich.  
Buffalo Wire Works Co., Buffalo, N. Y.  
Dufur & Co., Baltimore, Md.  
Eureka Supply Co., Chattanooga, Tenn.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
Meyers, Fred, J., Mfg. Co., Hamilton, O.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Netting.**  
Buffalo Wire Works Co., Buffalo, N. Y.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Rope.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Contractors Plant Mfg. Co., Buffalo, N. Y.  
Durable Wire Rope Co., Boston, Mass.  
Hazard Mfg. Co., Wilkes Barre, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Roebling's John A., Sons Co., Trenton, N. J.  
Trenton Iron Co., Trenton, N. J.  
**Wire Rope Filler.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Ironides Co., Columbus, O.  
**Wire Rope Shields.**  
Ironides Co., Columbus, O.  
**Wire Rope Thimbles.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Jackson Mfg. Co., Harrisburg, Pa.  
**Woodboring Machines.** (Pneumatic.)  
Rand Drill Co., New York, N. Y.  
**Woodsplitting Machines.**  
Fay, J. A., & Egan Co., Cincinnati, O.  
**Woodworking Machinery.**  
Chattanooga, Machinery Co., Chattanooga, Tenn.  
Coe Mfg. Co., The, Palmyresville, O.  
Cordeman, Meyer & Co., Cincinnati, O.  
De Loach Mill Mfg. Co., Cincinnati, O.  
Fay, J. A., & Egan Co., Cincinnati, O.  
Gibbes, W. H., & Co., Columbia, S. C.  
Hermann Mch. Co., Williamsport, Pa.  
Huther Bros., Rochester, N. Y.  
Lane Mfg. Co., Montpelier, Vt.  
Leland, F. W., Jasper, Tenn.  
Miller Oil & Supply Co., Indianapolis, Ind.  
Moshannon Mfg. Co., Philipsburg, Pa.  
Ober Mfg. Co., Chagrin Falls, O.  
Root, B. M., York, Pa.  
Shimer, Samuel J., & Sons, Milton, Pa.  
Smith-Courtney Co., Richmond, Va.  
Smith, H. B., Machine Co., Smithville, N. J.  
Walke, Henry, Co., Norfolk, Va.  
Whitney, B. D., & Son, Wrentham, Mass.  
**Yellow Metal.** (Sheet and Rod.)  
Waterbury Brass Co., New York, N. Y.  
**Zinc.**  
Merchant & Co., Inc., Philadelphia, Pa.  
New Jersey Zinc Co., New York, N. Y.



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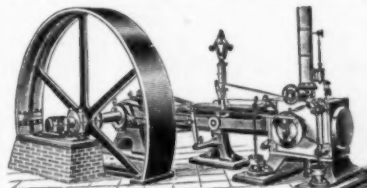
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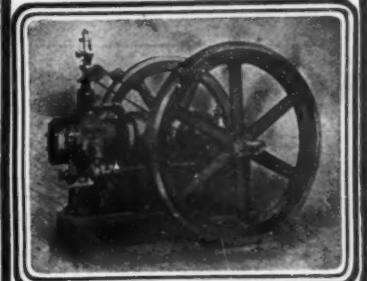
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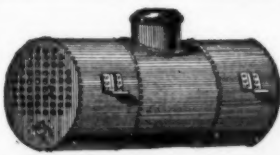
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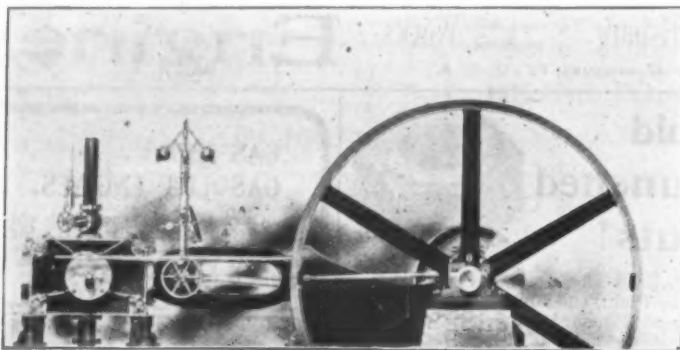
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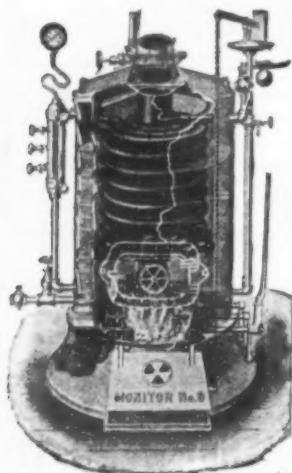
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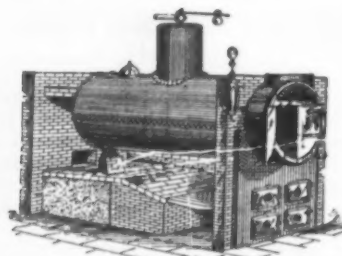
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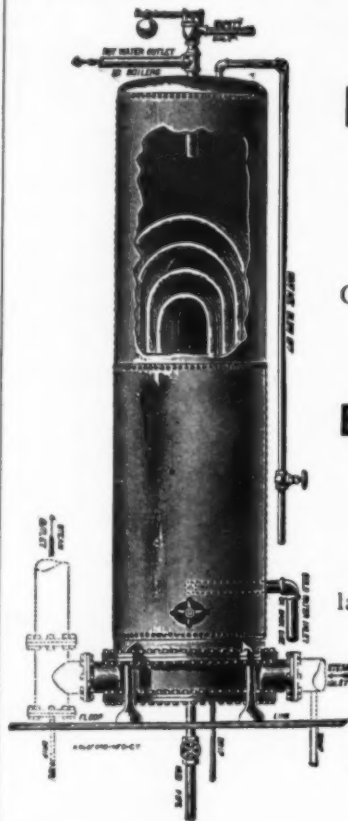
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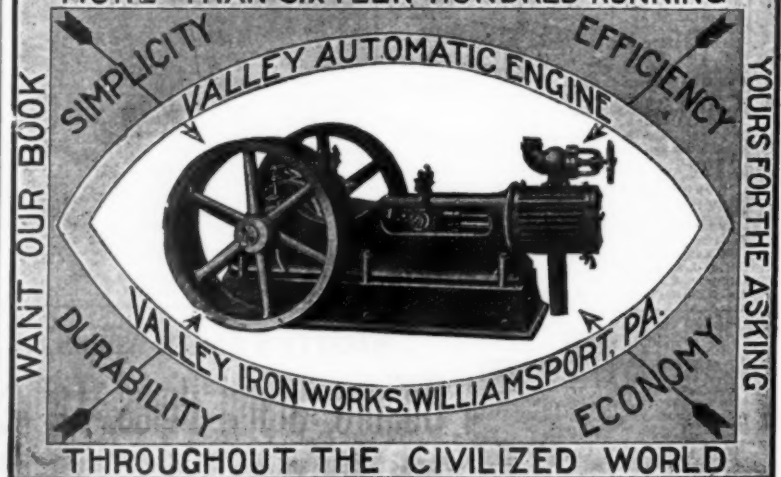
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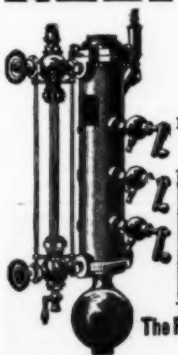
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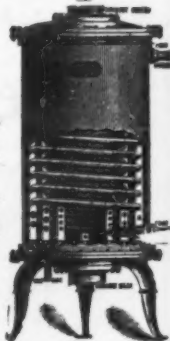
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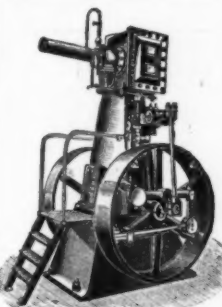
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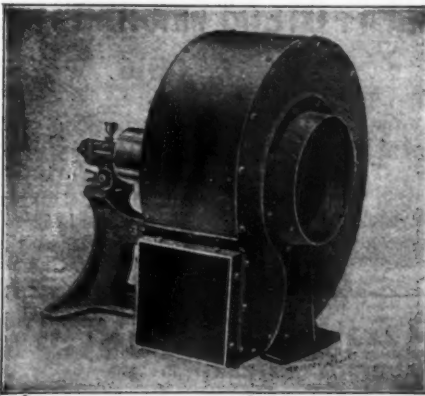
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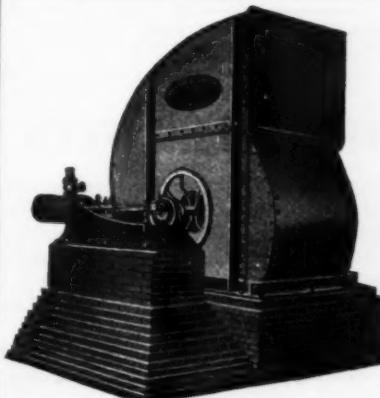
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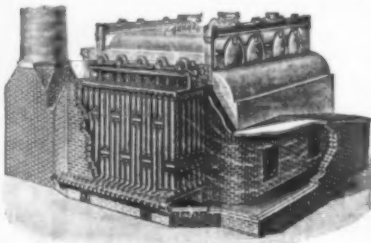
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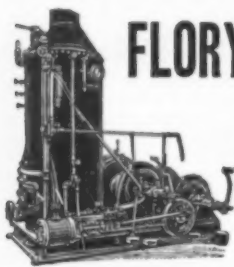
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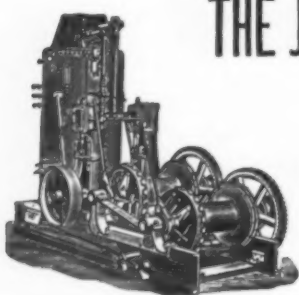
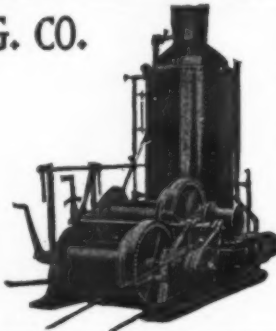
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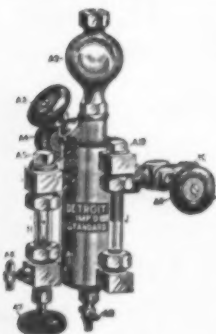
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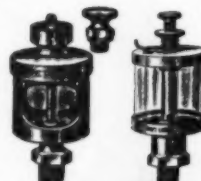
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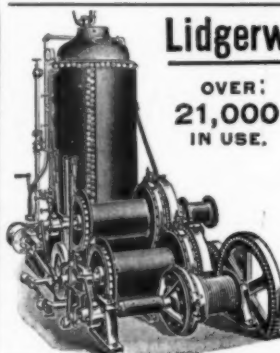
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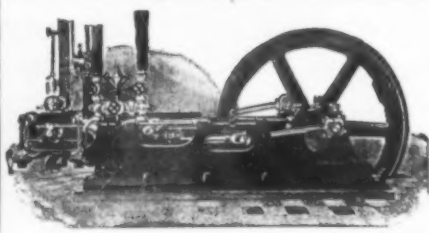
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**Ice and Refrigerating  
Machinery**  
is desired. Drop us a postal for  
literature.  
**The Fred W. Wolf Co.**  
**CHICAGO.**

5000 IN OPERATION.

Atlanta. Townsend Bldg., New York. Ft. Worth.

## ARCTIC Ice Making and Refrigerating MACHINES.

Ammonia Fittings and Valves,  
Tanks, Cans, Boilers and Supplies of All Kinds.  
24 Years' Successful Use.

Chicago, 18 W. Randolph St.  
Kansas City, 425 W. 5th St.  
Houston, Texas, 1909 Rusk Ave.

**The Arctic Machine Co.**  
Main Office and Works, CANTON, O.

## "STERLING" ICE and REFRIGERATING MACHINERY

Built for any capacity— $\frac{1}{4}$  Ton upwards.

Strongest Guarantee  
as to

Efficiency  
Economy  
Durability

Complete Ice Making and Re-  
frigerating Plants designed and  
installed.

**Sterling Machines have  
special features that make  
them superior to all others  
in the most essential  
points.**

Correspondence invited. Information cheerfully and promptly given.

**THE UNITED IRON WORKS CO.**  
Capital Stock \$650,000.00 **SPRINGFIELD, MO.**



"STERLING" Double Acting Ammonia Compressor.  
Direct Connected or Belt Driven.

Missouri State Building at World's Fair will be cooled  
by a "Sterling." Largest building in the world cooled  
artificially for personal comfort.

## "SOLVAY" CHLORIDE OF CALCIUM SOLID AND FLUID.

The Best Dryer for Air in Cold Storage Houses.  
Makes the Strongest Ice Machine Brine for the Least Money.  
Send for Calcium Circular and Prices.

**CARBONDALE CHEMICAL CO.,** **Carbondale, Pa.**  
New York Office, 141 Broadway. Pittsburgh, 727 Park Building.  
Boston Office, 544 Tremont Bldg. Chicago, 61 Portland Bldg.

## Frick Company,

Waynesboro, Pa.  
New York Office, 39-41 Cortlandt St.

## ICE MAKING AND REFRIGERATING MACHINES.

**Corliss Engines.**  
Condensing, Non-Condensing  
and Compound.

Steam Boilers, Traction and Portable  
Engines, Saw Mills, &c.

Catalogue on application.

## Ice and Cold Storage Machinery, SAFE AND ODORLESS.

The Brown Gas and Gasoline Engine.  
**THE BROWN-COCHRAN CO.**

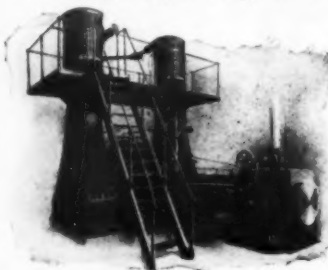
14 Globe Street, LORAIN, OHIO.



## A Good Reputation

is hard to acquire and harder  
to hold. We acquired ours 30  
years ago, and have it still in increased measure.

During the past five years we have sold over 490



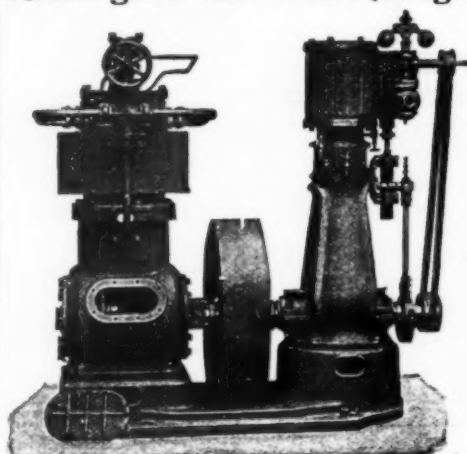
## Standard York . . . Ice-Making Machines.

Each has a daily average capa-  
city of 50 tons of refrigeration.  
You can't make any possible  
mistake if you install York equip-  
ment.

Write for descriptive  
Catalogue 4.

**YORK MANUFACTURING CO., YORK, PA.**  
Ice-Making and Refrigerating Machinery and Ammonia Fittings.

## Remington Ice and Refrigerating Machines.



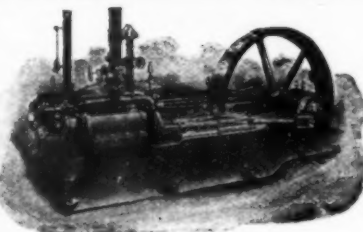
COMPLETE PLANTS  
INSTALLED AND  
GUARANTEED : : :

ICE MAKING—  
CAN OR PLATE SYSTEM  
REFRIGERATION—  
DIRECT EXPANSION  
OR BRINE SYSTEM

The REMINGTON Ice Machine is the  
STANDARD Machine of small capa-  
city. Beware of IMITATIONS, buy  
the ORIGINAL, it is the best.

Manufactured only by

**Remington Machine Co.**  
Wilmington, Del.



## Ice and Refrigerating Machinery.

When in the market for the above  
write us for estimates and catalogue.  
This cut represents the simplest and  
most durable compressor on the mar-  
ket. Compare it with others. Nearly 1000 installations in ten years prove the popularity of  
Barber machines. We devote special attention to small plants. In fact, we were the first in  
the market with a small machine, and still lead.

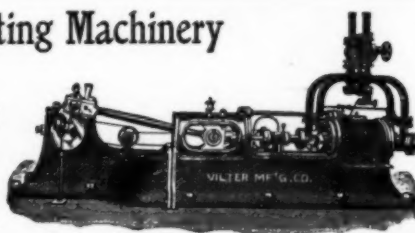
**A. H. BARBER MANUFACTURING CO.**  
221 So. Water Street, **CHICAGO.**  
OFFICES:  
Townsend Bldg., New York. Dallas, Texas. Los Angeles, Cal.  
713 E. First Avenue, Denver, Col.

## FIRST- CLASS Ice and Refrigerating Machinery

FOR  
Ice Manufactories, Dairies,  
Packing Houses, and

Anywhere where maintenance of low  
temperature is necessary.

**THE VILTER MFG. CO.**  
832 Clinton Street, Milwaukee, Wis.



## Our Improved Compression Ice AND Refrigerating Machines

are Economical and Simple in Operation, built from 1 ton  
up to 100 tons capacity.

"Single and Double Acting."

The machines now in operation prove it to be the most  
successful machine on the market. Write for information.

**Healy Ice Machine Company.**

**Chicago, Ill.**





# GREAT BARGAIN SALE

## —OF— DIEHL DIRECT CURRENT DESK AND CEILING FANS

### DESK FANS

Quantity in Stock	Catalog Number	SIZE	VOLTAGE	FINISH	NET PRICE, EACH
12	30	12-in.	110-v.	P. B.	\$ 7 75
9	30	12-in.	110-v.	Ox. Copper	7 75
23	30	12-in.	220-v.	P. B.	7 90
10	30	12-in.	220-v.	Ox. Copper	7 90
65	32	12-in.	110-v.	P. B.	7 90
34	32	12-in.	250-v.	P. B.	8 80
14	33	16-in.	110-v.	P. B.	10 35
10	33	16-in.	110-v.	Ox. Copper	10 35
16	33	16-in.	220-v.	P. B.	11 28
8	33	16-in.	220-v.	Ox. Copper	11 28
19	35	16-in.	110-v.	P. B.	10 62
6	35	16-in.	250-v.	P. B.	11 50

### BRACKET FANS

9	31	12-in.	110-v.	P. B.	\$ 7 90
8	31	12-in.	250-v.	P. B.	8 80
11	34	16-in.	110-v.	P. B.	10 62
3	34	16-in.	250-v.	P. B.	11 50

### CEILING FANS

3	12	2-Blade	110-v.	Brass	\$18 15
5	12	"	110-v.	Ox. Copper	18 15
6	12	"	110-v.	Japan	17 15
3	12	"	250-v.	Brass	19 50
9	12	"	250-v.	Ox. Copper	19 50
2	14	"	250-v.	N. P.	24 70
2	16	"	110-v.	Brass	27 50
3	16	"	110-v.	Ox. Copper	27 50
2	16	"	250-v.	Brass	30 75
6	16	"	250-v.	Ox. Copper	30 75
4	28	4-Blade	110-v.	Japan	14 75
17	28	"	220-v.	Japan	15 00
7	45	"	110-v.	Brass	16 45
27	45	"	110-v.	Ox. Copper	16 45
6	45	"	220-v.	Brass	17 70
7	45	"	250-v.	Ox. Copper	29 15
5	45	"	250-v.	Brass	29 15
6	46	"	110-v.	Brass	19 00
6	46	"	110-v.	Ox. Copper	19 00
6	46	"	220-v.	Brass	20 35
4	46	"	220-v.	Ox. Copper	20 35

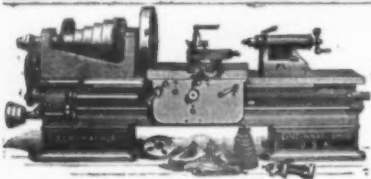
*Finding ourselves overstocked on Direct Current Desk and Ceiling Fans, we are willing to dispose of the following at less than factory cost. Shipments will be filled in regular order, subject to prior sale. Take advantage of the lowest prices ever known, and order at once.*

**Ewing-Merkle Electric Co.**

St. Louis

Complete Bulletin sent on request





**SCHUMACHER & BOYE,**  
**Engine Lathes,**  
Cincinnati, Ohio.

TRADE  
**MACHINERY**  
MARK

**Ready for Immediate Shipment.**

We have the following new tools in stock ready for immediate shipment to any part of the country.

Two 35 in. x 20 ft. New Haven Engine Lathes.  
One No. 4 Brown & Sharpe Universal Milling Machine.  
One 6 ft. Fosdick Machine Tool Co. Full Universal Radial Drill.  
One 35 in. x 20 ft. Schumacher & Boye Triple Geared C. R. Engine Lathe.  
One 26 in. x 48 in. x 16 ft. McCabe Double Spindle New Style Engine Lathe with Geared Face Plates.  
One 24 in. x 16 ft. Draper Engine Lathe with Triple Gears and T. A.  
One 28 in. x 16 ft. Draper Engine Lathe with Triple Gears, C. R. and T. A.

**All Kinds of Machine Tools and Machinery Supplies.**

Write today for our Catalogue.

**BAIRD MACHINERY CO.**

121-125 Water Street, PITTSBURG, PA.



**Eclipse Machine Co.**

Vulcan Bldg., 267 St. Clair St., CLEVELAND, O.

**We Make a Specialty of Contract Work for  
Light, Accurate Machinery.**

Model Making, Die Making, Metal Pattern Work, Screw Machine Work, Cam Cutting, Gear Cutting, Instrument Work, Special Machine Designing.  
Contract Work from Specifications and Drawings.  
We have Complete Equipment for Surface and Universal Grinding.

**CHAS. LEFFLER & CO.**  
49-61 Clymer Street,  
BROOKLYN, N. Y.

**MACHINERY FOR THE MANU-  
FACTURE OF SHEET METAL GOODS.**

For  
**HYDRAULIC  
TOOLS**

See Catalogue.

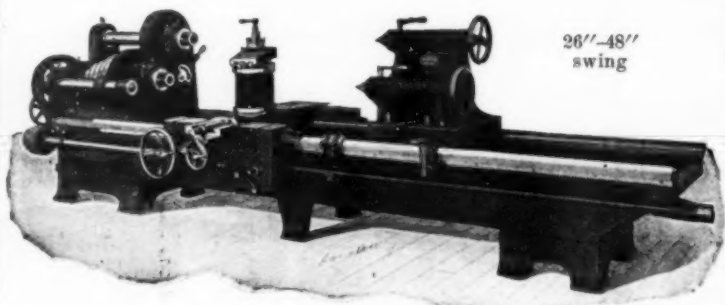
**WATSON-STILLMAN CO.**  
201-11 E. 43d St. NEW YORK.

**JACKS  
PUMPS  
PRESSES  
RIVETERS  
VALVES**

**The More I See of My New "Heavy  
Pattern" Double Spindle Lathe,**

and the more I know of its work under the widely varying conditions found in different shops, the more certain I am that there is not another lathe, at any price, that will be so everlastingly satisfactory, and that will so quickly pay for itself in all sorts of manufactories. It has been found particularly profitable in gas-engine, bridge and street railway shops, and the owners of all sorts of small and medium size shops are warm in its praise. Perhaps a list of those who are using it will do more to convince you than will anything I can say. Let me send you the list and the interesting details that I lack the room for here.

**J. J. McCabe, 14 Dey Street, New York City, U. S. A.**



**"WINNERS!"**  
**Standard Ball-Bearing  
Philadelphia Casters.**

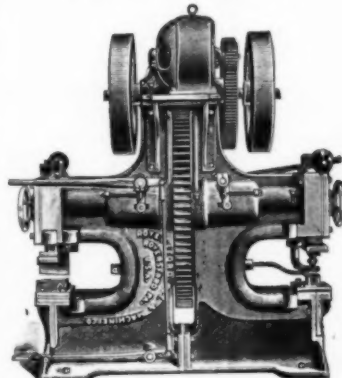
Samples and Catalogue Free.  
**Standard Caster & Wheel Co.**  
318-326 E. 23d St. NEW YORK.



*It would pay every town and every property-owner and agent in the South to advertise in the SOUTHERN FARM MAGAZINE. It is published by the Manufacturers' Record Publishing Co., Baltimore.*

**Royersford  
Punch and Shears**

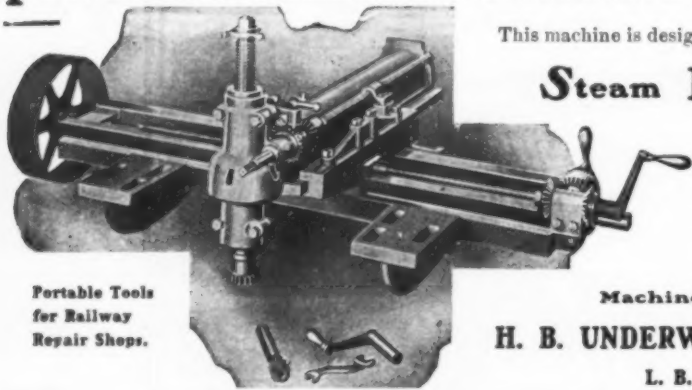
**Combined and Single.  
Motor or Belt Drive.**



We build a full and complete line of these Tools. Adapted for all uses. Ask us about them. Catalogue free.

**Royersford Foundry & Machine Co.**  
Royersford, Pa., U. S. A.

**PORTABLE MILLING MACHINE**



Portable Tools  
for Railway  
Repair Shops.

This machine is designed for facing

**Steam Engine Valve Seats**

in solid steam chests especially, but is used on various kinds of work where it is more convenient to carry a portable machine to the work, than to carry the work to the shop. It is strongly geared, has power feed in both directions, and can be used in any posture—horizontal, vertical or inclined. It works accurately and rapidly and can be run by hand-wheel, small steam engine, air or electric motor.

**Machines of Any Size Built to Order.**

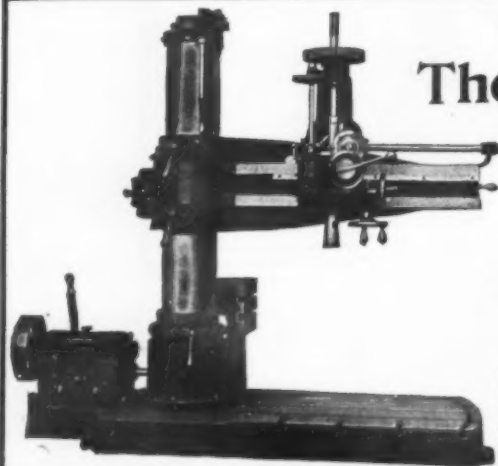
**H. B. UNDERWOOD & CO.,**

**Phila., Pa.**

**L. B. FLANDERS MACHINE WORKS.**

A few of the "56 POINTS OF VANTAGE" embodied in

**The New Bickford Radial.**



The arm is made in pipe section in order to overcome the combined stresses of twisting and bending.

Back-gears furnish four changes of speed, each of which transmits to the spindle more than double the pulling power of the next faster one.

The spindle is provided with a safety stop that throws out the feed when the spindle has reached its limit of movement. Our booklet, "56 Points of Vantage," tells the rest. Send for it.

**The Bickford Drill & Tool Company,**  
CINCINNATI, OHIO, U. S. A.

AGENTS. J. H. McArdle, New Orleans, La. Echols-Smith Hardware Co., Birmingham, Ala. The Fairbanks Co., Baltimore, Md. Georgia Supply Co., Savannah, Ga. W. E. Shipley, Philadelphia, Pa. Prentiss Tool & Supply Co., New York, Buffalo and Boston. Brown & Zortman Machinery Co., Pittsburgh, Pa. Marshall & Huschart Machinery Co., Chicago, Cleveland and Cincinnati. J. W. Wright & Co., St. Louis, Mo. Henshaw, Bulkley & Co., San Francisco and Seattle, Wash. Robinson & Cary Co., St. Paul, Minn. Scott Supply & Tool Co., Denver, Col. The Henry Walke Co., Norfolk, Va.



Single Spindle Reversible Shaper.

Single and Double Spindle Shapers, Combination Shaper and Carver, Cutter Heads, Wing Cutters, etc. Designers of Special Machinery.

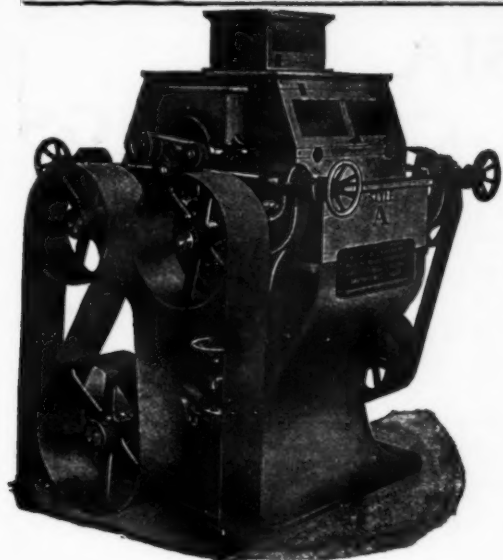
**Moshannon Manufacturing Co.**  
PHILIPSBURG, PENNA.

**Sheet Metal Working  
MACHINERY.**

See large ads. in last and next issues.

**J. P. ROBINSON & CO., Cincinnati, O.**





Allis Roller Mill.

## ALLIS-CHALMERS Co.

General Office **CHICAGO**, New York Life Bldg.

BUILDERS OF

### Flour Mills, Corn and Cereal Mills.

**Universal Bolters—Reliance Purifiers**  
**Reliance Sifters—Allis Roller Mills**

WRITE FOR DESCRIPTIVE CATALOGUE AND PRICES.



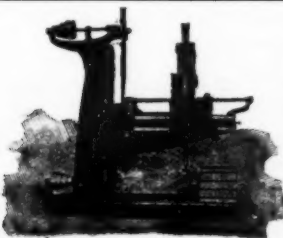
### Tools for Sheet Metal.

**TINSMITHS' and ROOFERS' TOOLS,  
PRESSES and DIES,  
SHEARING MACHINES,  
ROLLS, PUNCHES,**

Made by the

**Niagara Machine & Tool Works,  
BUFFALO, N. Y.**

Write for Catalogue M.



### RADIAL DRILLS, HORIZONTAL DRILLING BORING and MILLING MACHINES,

With every up-to-date feature embodied in their construction.

SEND FOR CATALOG M.

**THE FOSDICK MACHINE TOOL CO.  
CINCINNATI, OHIO.**

### MONARCH ATTRITION GRINDING MILL.

Specially Adapted to  
Grinding  
**LINSEED and COTTON  
SEED CAKE.**



Shipped Subject  
TO  
**15 Days' Trial.**

Not necessary to remove belts to open mill. Contains Quick Release, Movable Base, Chain Oiler, Phosphor Bronze Bearings, Perfect Feed and our Patent Ball Bearing at end of Spindles.  
**GUARANTEED** to do as much work, both as to Quantity and Quality, as any mill built, and the manner in which it is constructed makes it the **BEST MILL** offered to the trade. Write for prices.

**SPROUT, WALDRON & CO.,**

Builders of Flour, Meal and Feed Mills. Box 38. **MUNCY, PENNA.**

### THE SOUTHERN PIPE COVERING CO.

JOHN A. SELPH, Prop.

Successors to THE SOUTHERN ASBESTOS MFG. CO., RICHMOND, VA.  
Manufacturers of **Standard Asbestos-Magnesia Steam Pipe and Boiler Covering**  
and Cements. The only manufacturers of these materials in the South.



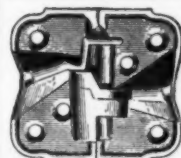
90%

of all the Buckets used  
in the construction of  
the N. Y. Rapid Transit  
Subway are manufactured  
by the

**G. L.  
Stuebner  
IRON WORKS,**

167-177 E. 34. St., Long  
Island City, N. Y.

Catalogue No. 444 gives full information of  
Buckets, Narrow Gauge Railways, Cars, etc., for  
every purpose.



### Cabinet and Builders' Hardware.

Specialties in Iron.  
**Wrightsville Hardware Co.**  
Wrightsville, Pa.

### The Bailey-Lebby Co.

MACHINERY and SUPPLIES.

AGENTS FOR

**Lodge & Shipley Lathes**  
**Cincinnati Milling Machines**  
**Cincinnati Shapers**  
**Cincinnati Planers**  
**Cincinnati Upright Drills**  
**Bickford Radial Drills**

A line of good, reliable tools.

**CHARLESTON, S. C.**

Try The B-L Co. Anti-Friction Babbitt.



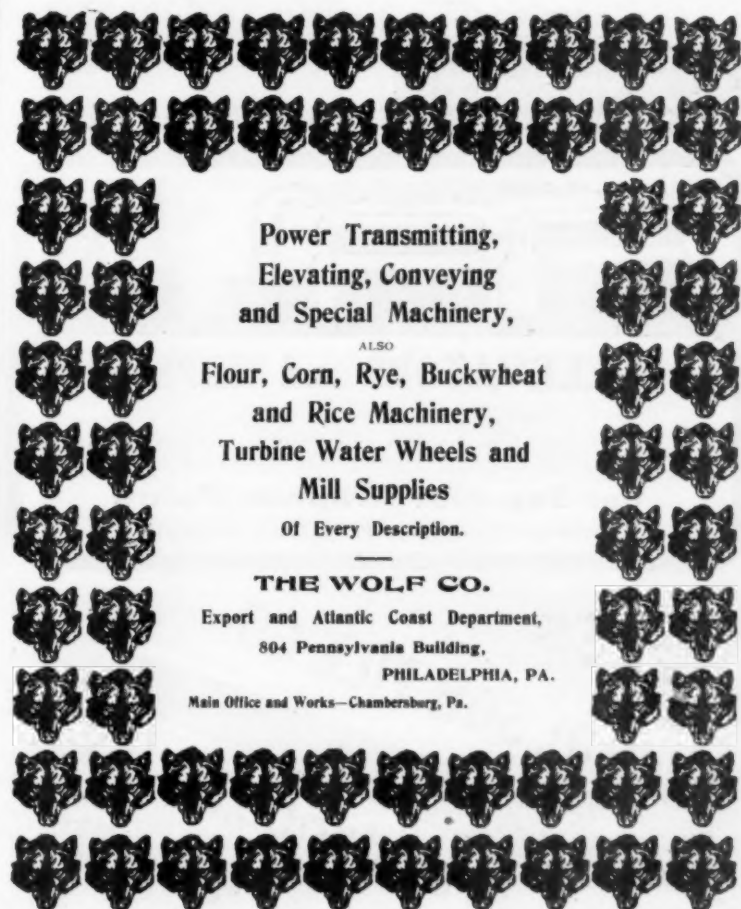
### BURR STONES

For all purposes.  
Manufactured by us.

Also ROLLER MILLS, SMUT MACHINES and  
GENERAL MILL MACHINERY.

Established 1847.

**B. F. STARR & CO., Baltimore, Md.**



**Power Transmitting,  
Elevating, Conveying  
and Special Machinery,**

ALSO

**Flour, Corn, Rye, Buckwheat  
and Rice Machinery,  
Turbine Water Wheels and  
Mill Supplies**

Of Every Description.

### THE WOLF CO.

Export and Atlantic Coast Department,  
804 Pennsylvania Building,  
**PHILADELPHIA, PA.**

Main Office and Works—Chambersburg, Pa.

# CAREY'S MAGNESIA STEAM PIPE AND BOILER COVERINGS

Are the Most Efficient, Durable and Economical.

The Philip Carey Manufacturing Co., { General Offices—**LOCKLAND, OHIO.**

FACTORIES—Lockland, O., Baldwinville, Mass., Plymouth Mfg., Pa.

BRANCHES—New York, Philadelphia, Boston, Pittsburg, Cleveland, Cincinnati, Charlotte, Atlanta.

See our Roofing Advertisement on Page 45

## American Sheet Steel Company

Battery Park Building New York

Manufacturers of all varieties of

## Iron and Steel Sheets

Black and Galvanized, Plain and Painted  
Flat, Corrugated and "V" Crimped

Apollo Best Bloom Galvanized Sheets  
Wellsville Polished Steel Sheets

W. Dewees Wood Company's Planished Iron  
W. Dewees Wood Company's Refined Iron

### GALENA-SIGNAL OIL CO. FRANKLIN, PA.

Successors to Galena Oil Company and  
Signal Oil Company, sole manufac-  
turers of the celebrated Galena  
Coach, Engine and Car Oils  
and Sibley's Perfection  
Valve and Signal Oils.

**Charles Miller,**

PRESIDENT

Rubber Stamps, Seals,  
Stock Certificates and Bonds,  
Manufactured by

**NATIONAL SEAL WORKS**  
P. O. Box 60, RICHMOND, VA.

**STOCK CERTIFICATES**  
FOR CORPORATIONS.  
NO DESIGNS. REQUEST OUR SAMPLES.  
MYERS' PRINTING HOUSE, NEW ORLEANS.

### THE PITTSBURGH REDUCTION CO. PITTSBURGH, PA.

#### ALUMINUM

Electric Conductors, Ingots, Bars, Plates,  
Castings, Tubes, Sheets, Etc.

Southern Office, Bond Bldg., WASHINGTON, D. C.

### COLUMBIA SUPPLY CO. COLUMBIA, S. C.

DEALERS IN—

Machinery Supplies.  
Everything for Saw Mills.  
Rubber, Leather and Gandy Belt.  
Pipe, Valves and Fittings.  
Estimates Given on Specifications.



### THE BARRETT MFG. CO.

Philadelphia, Pa. St. Louis, Mo. New Orleans, La.

Manufacturers of the  
famous



"Black Diamond" Prepared Roofing.

Also the largest Distillers and Manufacturers of COAL  
TAR AND COAL TAR PRODUCTS in the World

### THE INGERSOLL- SERGEANT DRILL CO.

26 Cortlandt St., N. Y.

### The Pohle Air Lift System.

Water Raised by Com-  
pressed Air.

**AIR COMPRESSORS.**

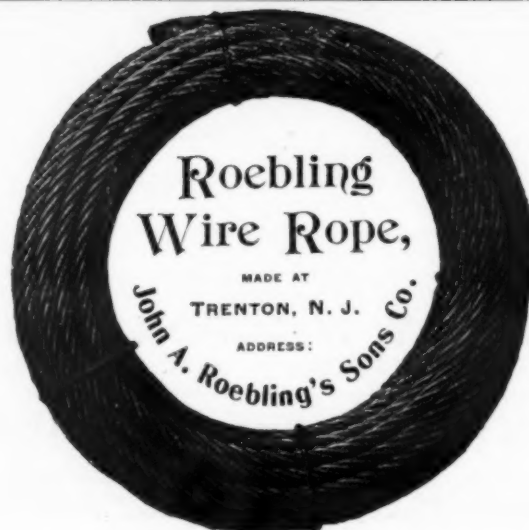
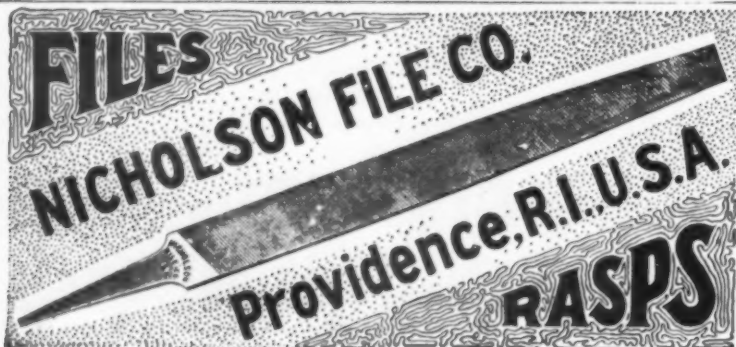


### ELEVATORS and SHIPS

in fact, all metallic surfaces, for their proper protection  
need a paint that is tough and durable; that resists  
heat, cold, moisture, fumes; that retains its color.

**Use Superior Graphite Paint.**

Detroit Graphite Mfg. Co., Detroit.





# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XLIV. No. 4.  
WEEKLY.

BALTIMORE, AUGUST 13, 1903.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

## Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE  
Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, President.  
THOMAS P. GRASTY, Vice-President.  
FRANK GOULD, Secretary-Treasurer.

OFFICE: MANUFACTURERS' RECORD BUILDING,  
BALTIMORE.

RICHARD H. EDMONDS,  
Editor and General Manager.

THOMAS P. GRASTY,  
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.  
TO FOREIGN COUNTRIES, - 25s. 6d. a Year.

BALTIMORE, AUGUST 13, 1903.

### COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

THE DAILY BULLETIN of the Manufacturers' Record is published every business day in the year for the purpose of aiding manufacturers and business men generally who need to keep in daily touch with the new industrial, railroad and financial developments of the South and Southwest. Supplementing and in connection with the work of the Manufacturers' Record, it is an invaluable aid to all who are seeking business in the South and Southwest, the most wonderfully endowed section of America, where industrial, railroad and financial activity is creating an ever-widening market for machinery of all kinds, railroad equipment and building supplies, and for financial operations, etc., and where the knowledge and skill of the engineer and expert will find their largest field of operation.

The Daily Bulletin is intended simply to cover every day the work of the "Construction Department" of the Manufacturers' Record in reporting every new mining, manufacturing, railroad and financial enterprise organized in the South and Southwest, and it is not intended to be a general daily newspaper. To all who want to be advised every day of every new enterprise organized in that section it is invaluable.

### For City Advertising.

Office of City Council.  
Lancaster, Ky., August 4, 1903.  
Manufacturers' Record Publishing Co.,  
Baltimore, Md.:

Sirs—I herewith enclose you voucher for \$12.40 on account of advertising in the Manufacturers' Record for bids for proposed water-works in this city. I will state that the bids resulting from said advertisement were satisfactory in every respect, and the contract was let to the firm of Bradford, Bee-man & Sheffield of New Albany, Ind., and I cheerfully recommend your journal for that purpose. Very respectfully,  
W. B. MASON, City Clerk.

Referring to the failure of Mother Jones and her "army" of "child slaves" to reach President Roosevelt, the Columbia State says:

Maybe this kindhearted old woman will get succeed in ameliorating the condition of

working children in Northern factories. In the meantime, what is that enterprising imaginative young woman, Marie Van Vorst, doing in behalf of those suffering people in her own community?

Marie is probably luxuriating in the memories of the hospitality of the Columbia State enjoyed by her when she visited South Carolina to assist in its crusade against "child slavery."

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 54 and 55.

### STEADY GROWTH OF EXPORTS FROM SOUTHERN PORTS.

Plainly written in the record of the exports of the country is the story of the steady growth of commerce at Southern ports. The following table permits of a comparison of conditions in 1893 and 1903 and shows the changes which have taken place at the several ports during the past ten years:

District.	1893.	1903.
Baltimore.....	\$71,506,995	\$81,704,497
Beaufort, S. C.....	939,773	181,794
Brunswick.....	5,097,942	8,595,199
Charleston.....	9,215,856	4,620,930
Fernandina.....	1,282,773	3,092,315
Georgetown, S. C.....	8,587	17,083
Newport News.....	8,113,714	25,508,391
Norfolk.....	8,877,228	8,757,499
Pamlico.....	7,072	2,385
Richmond.....	2,426,058	396
St. Johns, Fla.....	68,241	227,008
St. Marys, Ga.....	46,063	.....
Savannah.....	19,839,782	54,140,882
Wilmington.....	6,661,065	14,966,754
Apalachicola.....	392,390	251,228
Braz. de Sant.....	427,444	197,219
Corpus Christi.....	6,163,097	7,973,755
Galveston.....	37,476,494	104,121,087
Key West.....	1,096,365	631,616
Mobile.....	3,319,381	12,621,278
New Orleans.....	77,838,043	149,072,519
Paso del Norte.....	1,699,614	8,188,426
Pearl River.....	1,038,852	2,549,635
Pensacola.....	3,813,447	13,745,544
St. Marks.....	.....	381,551
Saluria.....	3,741,303	5,042,083
Tampa.....	615,903	1,639,302
Teche.....	1,057	7,284

Total South..... \$271,715,014 \$508,237,264  
All others..... 575,950,180 911,900,750  
Total United States. \$847,665,194 \$1,420,138,014

Three or four of the leading ports show comparatively slight increases or actual decreases. But the advances have been quite notable at six or seven. During the past ten years the value of exports has increased from \$77,838,043 to \$149,072,519, or \$71,234,476, equal to 91 per cent., at New Orleans; from \$37,476,494 to \$104,121,087, or \$66,644,593, equal to 177 per cent., at Galveston; from \$19,839,782 to \$54,140,882, or \$34,301,100, equal to 174 per cent., at Savannah; from \$8,113,714 to \$25,508,391, or \$17,394,677, equal to 214 per cent., at Newport News; from \$6,661,065 to \$14,966,754, or \$8,305,689, equal to 124 per cent., at Wilmington; from \$3,813,447 to \$13,745,544, or \$9,932,097, equal to 260 per cent., at Pensacola, and from \$3,319,381 to \$12,621,278, or \$9,301,897, equal to 280 per cent., at Mobile. The total advance for all the Southern customs districts was from \$271,715,014 to \$508,237,264, or \$236,522,250, equal to 87 per cent., and in all other customs districts from \$575,950,180 to \$911,900,750, or \$335,950,570, equal to 58 per cent.

The favorable showing by Southern ports in comparison with others made

during the ten years is maintained for the fiscal year just ended, a year in which there has been a slackening in export trade, still making, however, an increase. The figures for the several customs districts follow:

District.	1902.	1903.
Baltimore.....	\$80,532,512	\$81,704,497
Beaufort, S. C.....	183,234	181,794
Brunswick.....	7,338,808	8,595,199
Charleston.....	5,837,364	4,620,930
Fernandina.....	3,111,202	3,092,315
Georgetown, S. C.....	2,202	17,083
Newport News.....	33,504,830	25,508,391
Norfolk.....	7,088,335	8,757,499
Pamlico.....	602	.....
Richmond.....	.....	2,385
St. Johns, Fla.....	289,902	227,008
Savannah.....	41,525,428	54,140,882
Wilmington.....	11,102,171	14,966,754
Apalachicola.....	271,836	251,228
Braz. de Sant.....	178,927	197,219
Corpus Christi.....	7,432,546	7,973,755
Galveston.....	96,722,066	104,121,087
Key West.....	690,192	631,616
Mobile.....	12,503,558	12,621,278
New Orleans.....	134,486,863	149,072,519
Paso del Norte.....	7,228,322	8,188,426
Pearl River.....	2,155,013	2,549,635
Pensacola.....	14,466,928	13,745,544
St. Marks.....	.....	381,551
Saluria.....	4,439,123	5,042,083
Tampa.....	1,782,740	1,639,302
Teche.....	.....	7,284

Total South..... \$472,894,889 \$508,237,264  
All others..... 908,824,532 911,900,750  
Tot. United States. \$1,381,719,401 \$1,420,138,014

Between 1902 and 1903 the value of exports has increased from \$282,358,189 to \$306,422,527, or \$24,064,338, equal to 8.5 per cent., in Gulf districts; from \$190,536,680 to \$201,814,737, or \$11,278,057, equal to 5.9 per cent., in South Atlantic districts, and from \$203,916,454 to \$209,547,357, or \$5,630,903, equal to 2.7 per cent., in all other districts, excluding those of the North Atlantic, where there was a decrease from \$704,908,078 to \$702,353,393, or \$2,554,685, equal to .3 of one per cent. In the latter section the combined increases at New York and Portland of \$17,423,154 could not balance the combined decreases of \$21,129,295 at Boston and Philadelphia. And the gain of a few million in other districts exclusive of Southern and North Atlantic was made at the northern border and Lake ports from \$111,441,279 to \$125,758,847, or \$14,317,568, more than sufficient to overcome the decrease from \$92,475,175 to \$83,788,510 (\$8,686,665) at the Pacific and a couple of other ports. As it is, the increase at the Southern ports was nearly 92 per cent. of the total increase for the country. It was from \$472,894,889 to \$508,237,264, or \$35,342,395, equal to 7.4 per cent., while at all other ports it was from \$908,824,532 to \$911,900,750, or \$3,076,218, equal to but .3 of one per cent.

The increase in cotton constituted about 65 per cent. of the total increase in the value of the country's exports during the year from \$1,381,719,401 to \$1,420,138,014, or \$38,418,613, equal to 2.8 per cent. Not all of the cotton went through Southern ports. But mention of it directs attention to the steady growth of the South, not only as a handler of more than a third of the country's exports, but as the basis for a larger proportion of the total export business. Of the exports of 1903 those exclusively from the South, practically, were: Cotton, \$316,180,429; cottonseed products, \$26,943,741; bituminous coal, \$14,473,927; naval stores, \$12,918,322, and phosphate, \$6,344,224, a total of

\$376,800,643. A conservative estimate of the South's share in exports produced in other parts of the country as well as the South is: Tobacco, \$35,000,000; lumber, \$25,000,000; petroleum, \$25,000,000; grain, \$20,000,000; provisions, \$18,000,000; cotton cloths, \$17,000,000; cattle, \$10,000,000; fruits, \$3,000,000, and sugar and molasses, \$1,500,000, a total of \$154,500,000. There must be considered, too, the direct or indirect portion of the South in \$7,000,000 of exports of cotton goods other than cloths, in \$9,000,000 of cotton cloths not made in the South, in \$96,000,000 of iron and steel products, in \$31,000,000 of leather and its products, in \$13,000,000 of manufactures of wood and in other goods made in the South, or made elsewhere of material produced there. Ten million dollars is a fair estimate of this portion, which, added to the other totals, would make the South's share in the country's exports close to \$550,000,000, or about 38 per cent. of the total exports.

This proportion is bound to increase. With the steady development of the cotton-mill industry, tending to make greater home demand for the staple, there may be a decline in the comparative amount of cotton exported. But this should be partly balanced by the increase in the exports of cotton goods. In the meantime the promise of the South as a larger and larger contributor to the country's trade and industry is had in the increase since 1880 of the production of coal from 6,000,000 tons to more than 60,000,000 tons, of pig-iron from less than 400,000 tons to over 3,000,000 tons, and of petroleum from less than 300,000 barrels to more than 20,000,000 barrels, in the more than quadrupling of the value of forest products and in the more than doubling of the railroad mileage, bringing outward-bound commerce back to its natural trend toward the Gulf and South Atlantic ports.

### ANOTHER PHASE OF THE CAMPAIGN AGAINST THE SOUTH.

The New York Tribune ought to be informed on business matters, and it ought to be fair and honest. But a recent editorial indicates that it is either very badly misinformed as to cotton, or else that it is willing to misrepresent the case in order to hammer down the price of cotton. At the start it may be taken for granted that cotton manufacturers at home and abroad are of necessity bears on the cotton market. Low prices for cotton necessarily mean a larger margin of profit in its manufacture and less money needed in handling the raw material. In this fact is found a potent reason for the tremendous pressure from Europe and from the East in the press as well as in mill circles against high prices for cotton, and the persistent agitation against every effort made to advance the price, with never a protest against any effort of the bears to depress prices. The bull movement could never have been carried to the point attained unless the underlying condition had given some

basis for high prices. This movement demonstrated that the supply of cotton is not as great as had been supposed, for it showed that many mills at home and abroad were practically bare of stock. As to whether it has been carried too far or whether the leaders can unload at these high figures is another question, but it has opened the eyes of the world to the situation and made it certain that the farmers will this year get profitable prices, while heretofore the best figures have generally been obtained after the bulk of the crop has passed out of the planters' hands. Returning, however, to the Tribune. In an editorial against the bull movement it says:

Great Britain has more than twice as many spindles, and the European Continent has 60 per cent. more than the United States. Moreover, the number of spindles in other countries is increasing much more rapidly than in the United States. With all our boasted enterprise and the considerable development of cotton-spinning in the South, we are actually falling behind the rest of the world in the manufacture of cotton and are returning to the inferior state of a country that merely produces the raw material for others to manufacture. In such circumstances the most rudimentary common sense would indicate the desirability of this country's doing its best to maintain itself in favor as a provider of raw cotton. But it is not doing so. It continues to produce cotton. It is increasing its acreage of plantations year by year. At the same time it is as steadily and even more rapidly increasing the price of the staple. That is what hurts, for foreign customers see that the increase of price is chiefly artificial and speculative. It is not due to scanty crops; it is not for the benefit of the farmers. It is due to the greed of speculative middlemen, who corner the supply, and then force the price up for their own gain. No wonder that in such circumstances all our foreign customers are talking about industrial emancipation and are taking practical steps to secure it. A discreet policy might have kept the world chiefly dependent upon us for cotton for uncounted years to come. The present mad policy is bringing into the near future the day when we shall have three times as much cotton as we can use ourselves and no foreign market for the surplus, unless in competition with the pauper-worked plantations of Africa and Asia, which will be able to force us down to three-cent cotton instead of the fifteen cents in which shortsighted speculators have been exulting.

Nearly every statement made in this reprint is absolutely false. The Tribune says, "We are falling behind the rest of the world in the manufacture of cotton," and that the number of spindles in other countries is increasing more rapidly than in the United States. Let us see the facts. Shepperson's "Cotton Facts," the standard cotton authority, makes a very different showing. The real facts are as follows:

Crop year.	Great Britain.	Europe.	India.	United States.
1891-92.....	45,350,000	26,405,000	3,402,000	15,200,000
1901-02.....	47,960,000	33,900,000	5,200,000	21,400,000
Inc. since.....	1,850,000	7,495,000	1,798,000	6,200,000
P. ct. of inc.	3+	28+	52+	40+

The total number of spindles compares as follows:

Great Britain, Cont. & India.	1891-92.	1901-02.	Inc.	P. ct. inc.
United States.	15,200,000	21,400,000	6,200,000	40+

Of the gain in the United States of 6,200,000 spindles 4,450,000 were in the South, where the percentage of increase was 228. Starting in 1891-92 with 15,200,000 spindles, the United States had by 1901-02 increased to 21,400,000, or a gain of over 40 per cent., and since then had made very rapid progress in increasing its spindles, while the rest of the world, starting at the same time with 75,157,000 spindles, had by 1901-02 increased to 86,100,000, or a gain of only 14 per cent. The gain in the South alone was nearly four times greater than the total gain in Great Britain. Ten years ago

the South had less than one-twentieth of the number of spindles of Great Britain; last year it had nearly one-seventh, and since then the increase in the South has been so rapid that today it has nearly 8,000,000 spindles, or one-sixth of Great Britain's total in 1901-02. Even New England, where the cotton industry has been more stationary than in the South, the increase was 1,750,000 spindles, or 13 per cent., against 1,650,000 spindles, or 3 per cent., in Great Britain. And yet the New York Tribune says the United States "are actually falling behind the rest of the world in cotton manufacturing" and that "the number of their spindles is increasing more rapidly than ours."

The Tribune says we are increasing production year by year—or, rather, it says acreage, but it means production—but that we are even more rapidly increasing the price. Disregarding the present "cornered" price, for, of course, the Tribune would not base such a broad statement on a temporary price due in part to manipulation, is the Tribune aware of the fact that even in 1859 the South raised nearly 5,000,000 bales, or almost one-half of our average crops of late years, and sold it at an average for the New York price at 11 cents, and that except for a brief period between 1840 and 1849 cotton never ruled as low as during the last few years? And, then, the Tribune predicts the coming of a day when "we shall have three times as much cotton as we can use ourselves." Since 1898 we have made no increase in cotton production. In that year we produced 11,199,000 bales, and in the following year 11,274,000 bales. These were the largest crops ever raised, the yield of the next three years averaging only 10,160,000 bales, a decline of over a million as compared with the crops of 1898 and 1899; but during that period we have increased our consumption of cotton over 500,000 bales a year. We are already using in our own mills 40 per cent. of our annual production, and our consumption is gaining on our production, so the Tribune's "three times" is as wild as its other statement. But enough of such stupid work which passes current with the North when discussing anything pertaining to the South.

#### GEORGIA NOT TO BLAME.

Characterizing as a disgraceful farce the "lobby sensation" with which the Georgia legislature distinguished its closing hours, the Macon Telegraph says:

The nearest approach to a "cold trail" was found in the testimony of a member from the upper part of the State, who confessed that he was "young and green." He said that during the pendency of the child-labor bill a stranger approached him in the lobby of the house and told him that it would be worth \$500 to him to oppose that bill. He didn't know the man; hadn't seen him since; never saw him before; didn't know his name; couldn't remember what kind of hat or clothing he wore; heard that he was from Alabama. No one but a fool would approach a member of the house, a stranger, in that way. One working to corrupt a legislator would not employ a fool to do it or trust him with \$500. It has been a campaign of hint and innuendo from start to finish, unworthy of Georgia, unworthy of Georgians, and calculated to make a most unfavorable impression upon the casual reader abroad.

Fully agreeing with the Macon Telegraph in its characterization of the "child-labor" campaign in Georgia, the Manufacturers' Record may suggest that the young legislator was actually approached as eminently qualified to receive an impression that money was being used to defeat the "child-labor" bill; not by any means that money was so used—such a thing was unneces-

sary—but the attempt to create such an impression through tactics inseparable from mudsill politics was not beyond the limits of about the only lobby apparent in this "child-labor" agitation—the lobby favoring it, and skillfully by false pretense enlisting the sympathies of decent men and women. The experience of Georgia has not been unique. It has been but an exaggerated repetition and a culmination of the features of a three or four years' campaign of ignorance, fanaticism and deception.

#### MORE RIDICULOUS EDUCATIONAL STATISTICS.

An apparent accretion to that address "recently delivered" before the faculty and students of Washington and Lee University, Lexington, Va., in furtherance of the Southern Education Scheme was given to a gasping world at the meeting of the National Education Association at Boston. Among the statements which have alarmed one or two unthinking ones are the following, comparing for some reason or other not clearly revealed the number of white illiterates in certain Southern States with the white population of certain cities in those States:

The white illiterates of Georgia \* \* \* exceeded in 1900 the number of white population of Georgia's three largest cities. The white illiterates of Tennessee exceeded in 1900 the number of the total white population of her six largest cities. The white illiterates of Alabama exceeded the number of the aggregate white population of her fifteen largest cities. The number of the white illiterates of North Carolina \* \* \* is more than double the number of the combined white population of her sixteen largest cities.

Reproducing the paragraphs in which this nonsense occurs, because the calculations "are of such tremendous import," the Atlanta Constitution says:

The bar sinister of Southern illiteracy was advertised at the recent meeting of the National Education Association and by Southern men in a way to cause every thoughtful and patriotic citizen of the South to do one of two things—either hang his head in helpless shame or lift it up with a stern resolution that by the grace of God and the power of his ballot that bar shall be removed as rapidly as time and money will co-operate to that end.

So the Chattanooga News, passing on the paragraphs, says:

This is the worst arraignment of the South that has fallen under our notice. And it comes from a Southern man. We cannot dispute a single thing he says, because he confines himself to a terse statement of facts.

What's the use of disputing it? What's the use of disputing the terse statements that the earth revolves around the sun, that Borelli's comet has developed three tails, and that statistics are full of snares for the unwary? But as a matter of diversion, using 1900 census figures, a few terse facts constructed upon the theory propounded at Boston, which has so startled the Lynchburg Advance, may be stated:

The white population of the four largest cities of Florida is more than double the number of white illiterates in the whole State.

The white population of Baltimore is more than eleven times the number of all the white illiterates in Maryland.

The white population of the five largest cities of Texas is nearly 15,000 more than the number of white illiterates in the State.

The white population of Richmond, Norfolk, Roanoke and Newport News, Va., is more than 9000 greater than the number of white illiterates in Virginia.

The number of white illiterates in New York city, 175,982, is more than three times the number of white illiterates in South Carolina, 74,718

greater than the number in Georgia, 71,099 greater than the number in Alabama, 16,896 greater than the number in Tennessee and 75 greater than the number in North Carolina. It is 19,944 greater than the aggregate number of white illiterates in Maryland, Virginia and Florida.

The number of white illiterates in Massachusetts is more than three times the total population of Nevada, and nearly 8000 more than the total population of Arizona.

Of course, such comparisons are absurd as far as they relate to anything significant as to education, but they are no whit more absurd than the "startling" comparisons made in the Boston speech, especially when it is borne in mind that the largest white city population in Georgia is 54,092 at Atlanta, in Tennessee 52,380 at Memphis, and in Alabama 21,832 at Birmingham, and that the aggregate white population of the twenty-eight North Carolina cities having 2500 or more inhabitants is less than 111,000, Charlotte having the largest number, 10,938.

There is significance for the New York engineers of the Southern Education Scheme and their allies of North Carolina residence or origin in the fact that the aggregate white population of these twenty-eight North Carolina cities is 65,000 less than the illiterate white population of New York city and 20,000 less than the illiterate white population of Massachusetts.

#### ELECTRIC STREET RAILWAYS IN THE SOUTH.

One of the most notable results of the utilization of electricity for power is the development of street railways in the United States. The approximate figures of the length of lines for 1890 and 1902 for all electric railways, irrespective of their length or location, and for all street railways, irrespective of their motive power, enable one to note the advance in the South in comparison with the rest of the country, as follows:

States.	1890.	1902.
Alabama.....	139.06	167.70
Arkansas.....	62.81	38.01
District of Columbia.....	45.22	82.68
Florida.....	22.54	57.43
Georgia.....	157.46	222.18
Kentucky.....	131.00	138.56
Louisiana.....	114.34	131.67
Maryland.....	102.57	258.78
Mississippi.....	18.25	22.74
North Carolina.....	16.19	39.44
South Carolina.....	27.19	63.33
Tennessee.....	132.40	199.87
Texas.....	185.19	254.55
Virginia.....	59.17	266.84
West Virginia.....	26.45	133.06
Total.....	1,229.86	2,120.84
United States.....	5,783.47	16,651.58

The change in power is shown by the following mileage table:

Power.	1890.	1902.
Electric.....	165.21	2,069.94
Animal.....	558.20	31.00
Cable.....	3.70	.90
Steam.....	202.75	29.00

In the meantime the changes in the rest of the country have been as follows:

Power.	1890.	1902.
Electric.....	749.04	14,160.68
Animal.....	2,303.74	164.21
Cable.....	270.62	113.02
Steam.....	321.31	82.82

These figures show that during the period under review the increase in the length of lines has been confined to lines operated electrically. The steam engine, the horse and mule, the old standbys, and the cable, which, with the exception of two or three cities, was something of an experiment, are disappearing forever from that field of transportation. Naturally, the greatest expansion in street and electric railways has been in the Northern and Middle Western States, Massachusetts having 2037.79 mileage, nearly as much



as the whole South; Pennsylvania, 2001.56; New York, 1822.31; Ohio, 1858.85; Illinois, 902.85, and Indiana, 523.60. The growth of such cities as Chicago, New York, Philadelphia and Boston, with the density of the population in the country contiguous to cities in the Eastern States often exceeding the density of the whole population of Southern States, has demanded such means of transportation, and the application of electricity has made them possible. But it will be noted that while the increase in mileage has been 218 per cent. for the rest of the country and 73 per cent. for the South, the rate of advance in the use of electricity has been more equally distributed, increasing from 165.21 to 2069.94, or 1904.73, equal to 1156 per cent. in the South, and from 749.04 to 14,160.68, or 13,411.64, equal to 1790 per cent. in the rest of the country.

As in other respects, the South, entering later upon the field, has been able to avoid the waste that comes from change of equipment in the development of its street-railway system. With its expansion into interurban lines that system may be expected to differ somewhat from the expansion in the North. There it has been in large measure the linking together of many towns almost within sight of each other and has been occupied principally with passenger traffic. In the South its effect should be to diffuse the population more equally between city and country and to become of importance in freight carriage.

#### BITTER AGAINST COTTON BEARS.

A correspondent in a letter to the Manufacturers' Record claiming that New York "bears" are largely responsible for the fight waged for years against fair prices for cotton grows exceedingly bitter. As an expression of the sentiment prevailing his letter is worth publishing merely to show how strong is the feeling, since it is written by a man of wide acquaintance throughout the South:

Naturally the South, the producers, are on the bull side of the market always. Heretofore the South has been too poor to be independent. "Under these conditions," declared one critic to me, "a gang of professional bears in New York has beaten down the South, depriving her cotton-growers of their just earnings. Is it any wonder that a strong feeling of antagonism against the New York bear exists down here?" Your professional bear is an enemy to progress and prosperity. He feeds on disaster, and even creates it when he can. No calamity, however great, but he hovers in the air, like a vulture, waiting to fatten on the dead. In his heart there is a thrill of joy when a President is shot. A devastating flood, a ruinous disaster, are his delights.

In his report to the stockholders of the News and Observer Publishing Co. of Raleigh, N. C., Mr. Josephus Daniels, the president and the editor of the paper, reported that since 1894 the number of subscribers had increased from 1800 to more than 8000, and that the past year has been the best in the history of the paper. In his report Mr. Daniels, referring to several special editions bearing upon the industrial, commercial, educational and political good of the State, said: "These papers, particularly those that have been devoted to telling of North Carolina resources, progress and advantages, are everywhere acknowledged to have been among the chief agencies that have brought the newer and larger progress that has touched every section of the State." It may be added that these special editions have also demonstrated the alertness and energy of the editorial management which is reflected so satisfactorily

in the physical condition of the News and Observer.

#### No Jeremiahs Need Apply.

[New York Sun.]

In a letter to a Richmond firm Mr. Richard H. Edmonds, editor of the Baltimore Manufacturers' Record, gives some important and cheerful statistics in regard to Southern prosperity. He estimates that this year's cotton and cottonseed crop within the next twelve months will bring the Southern farmers at least \$600,000,000, and that other Southern agricultural products will amount to "not far from \$900,000,000," a total of about \$1,500,000,000 for one year's farming, and the manufacturing product exceeds in value the agricultural. While the cotton crop represents only about 40 per cent. of the total value of the agricultural product of the South, it is the great money crop. For a hundred years high cotton has been accompanied with general Southern prosperity.

Between 1900 and 1902, years of Southern industrial activity and fair prices for cotton, the gain in the assessed value of Southern property was \$460,000,000, an annual average of \$230,000,000, as against an average of \$79,000,000 for the preceding ten years. In spite of the panic of 1893, the industrial depression and the low price of cotton, the South has established its credit and accumulated capital and put its manufactures on a solid basis. In the last three years Southern coal mining and coke mining and cotton manufacturing and iron making have been developed and brought up to date. Capital and immigration have been attracted. In short, "the South's material advancement, based on the upbuilding of its manufacturing and mining interests and the rapidly-increasing development of its agricultural interests, promises to tax to the utmost the freight-handling facilities of all Southern railroads."

So much for Southern prosperity. Have the Southern Democrats any further use for political policies that deny patent facts and wail over imaginary woes? The Atlanta Constitution makes the Edmonds letter the text for a sermon:

"What interest can such a people have in prophecies of calamity and creeds of discontent? We are for prosperity, and the deep-seated determination of our people is to foster and further it. Whoever expects to make headway with a gospel of lamentations in the South will find that he is estrayed from his proper pasture, if there be any pasture left in this country for such an ass."

Does the editor of the Commoner ever read the papers?

#### Cottonseed-Oil Machinery Wanted in India.

Bhupati Nath Bhowe, 77 Sitaram Ghose's street, Calcutta, India, manufacturers and merchants' representative, a subscriber to the Manufacturers' Record, writing under date of July 9 says:

"Some of my friends who are interested in American goods wish also to subscribe to your valued journal, so I hope to remit in a mail or two one draft for at least three subscriptions."

"One of my friends wishes to establish cottonseed-oil-making machinery in connection with cotton baling and other business which they have resolved to establish. Kindly introduce to a good firm who will undertake to supply all machinery in connection with this business, and send me per return mail detailed particulars and proper estimate and cost of the machinery and approximate charges, freight, etc., to get these landed in Calcutta."

## STIMULATING TO SOUTHERN DEVELOPMENT.

Editor Manufacturers' Record:

I have read the letter addressed by you to John L. Williams & Sons of Richmond, Va., with the greatest pleasure and profit. It is inspiring, encouraging and full of radiant hopefulness. It gives a comprehensive review of the industrial advancement of the Southern States and the rapid growth which they are making in the leading departments of human effort, such as manufacturing, mining, agriculture and horticulture. To these might have been added the advance made in lumbering, railroad construction and fisheries.

My present purpose is to point out a few of the forces now at work in the South along those lines that will give permanence to its present prosperity.

First of all among the potent factors in stimulating development is the reduced rate of interest on money throughout the Southern States. Ten years ago it was difficult to borrow money in any of the cotton-growing States at a less rate than 10 per cent., often 12 to 15. Now money is easy at from 6 to 8 per cent., and with gilt-edge collateral at from 4 to 5 per cent. This decrease in interest charges implies two things—the greater supply of loanable funds in the South and the higher standard of credit which the South has attained. In the tobacco-growing districts nearly all well-to-do planters are forehanded. I can mention one or two counties in Tennessee where the aggregate loans made by the farmers (not to the farmers) will go far up into the millions. Such a thing was never known before in the history of the South. I find, upon investigation, that the same condition exists among many of the tobacco planters of North Carolina. I know of one planter who has tried to lend out his surplus money, but finds it difficult to get over 5½ per cent. with satisfactory security.

This growing thrift among the agricultural classes is due to several causes, the chief of which is the better methods now in operation upon the farms and plantations. Better implements are used in the preparation of the soils and in the cultivation of the crops. There is more pride taken as to the character and efficiency of the working animals. Better gear is furnished for them; better feedstuff is provided; better stock barns are built, and there is a tendency to employ every agency that saves labor or multiplies results. Twenty years ago there was comparatively few fertilizers used on the cotton or tobacco plantations. It was a rare thing to save stable manure. Now the South uses the largest part of the fertilizers manufactured in the United States. Statistics show the amount expended for fertilizers in the Southern States for the year 1902 to have been \$28,882,854, while the amount expended in all the States was \$53,387,539, showing that the South consumed more than half the commercial fertilizers manufactured. The result of this large expenditure for fertilizers is seen in the constantly-increasing size of the crops of cotton and tobacco. In 1879 the cotton crop amounted to 5,073,583 bales, as against 10,701,453 bales (487 pounds each) in 1902. The tobacco crop has been augmented from 472,661,157 pounds in 1879 to 868,163,275 in 1899. Soils often grow a bale of cotton upon which a half bale grew in 1880, and 1200 pounds of tobacco where 700 pounds grew.

A new era in the history of cotton and tobacco culture was opened in 1880. Extensive cultivation, with its land-depleting methods, has given place to intensive farming and soil restoration. The improvement in the soils is seen throughout the South. Old fields that were turned out

and lay fallow for generations have been refenced and reclaimed, and many of them are now the most profitable portions of the farms. This is especially true in the tobacco-growing districts of the Carolinas. In 1880 these old fields were not in demand at fifty cents per acre. In 1885, ten years thereafter, many of them sold in the market for \$30 to \$40 per acre. This astonishing increase in value was due to their adaptability for the growth of yellow tobacco, which finds its most suitable soils on land that had been exhausted in the cultivation of cotton and corn. Large areas of worn-out and unproductive soils have been reclaimed by the judicious use of commercial fertilizers and stable manure.

Nor do the efforts to improve the soil stop with the use of fertilizers. Cowpeas and clover are sown in regular rotation. Soy beans, vetch, alfalfa, velvet beans and many other plants are now grown for the enrichment of the soil, as well as for the making of forage. Attractive dwellings are seen where unsightly cabins stood twenty years ago. Fences are now made of wire where the laws do not permit the doing away of fences. North Carolina, Georgia and one or two other States are saving millions every year in the matter of fences by providing that stock shall not run at large.

The improvement in Southern agriculture has been most remarkable in the increasing diversity of the crops. In the ante-bellum days corn and cotton or tobacco and wheat were the standard money crops, and few efforts were made even to grow live-stock or hay or forage upon the plantations. Now all this is changed. Diversity is becoming the leading characteristic of Southern agriculture. Take any portion of the Southern States north of the main cotton belt, and from thirty to fifty different vegetable products are grown for market. Thirty years ago but few oranges, pineapples, peaches, melons, tomatoes or strawberries or other produce coming under the head of truck were shipped from points south of the Ohio and Potomac rivers. Now the railroads are taxed to their utmost capacity in the months of maturing to meet the requirements of the growers of fruit, vegetables and melons. Millions of dollars are now received for products that were almost unknown from a commercial point of view in 1875. The rapid development of the rice industry is one of the marked features of the past decade. Lands that were esteemed comparatively worthless are now commanding prices that would have been regarded as the delirious dream of a crazy optimist a few years ago. The oil fields of the South are assuming an importance that will soon eclipse those of Pennsylvania or Ohio. West Virginia, Kentucky, Tennessee, Louisiana and Texas will no doubt soon be regarded as the great oil centers of the world.

And yet this is but the beginning of the development of the immense potentialities of the Southern States. With the rise of its manufacturing of cotton, tobacco, iron, wool, wood, phosphate; with the extension of its railroad system into regions now untamed, but with natural resources heretofore undreamed of; with the increasing output of coal, iron, copper, phosphates, marble, salt, sulphur; with the incoming of intelligent and highly-trained labor; with a more intensive agriculture and with the establishment of educational institutions that will train the hand as well as the brain; with the assistance of Southern boys so educated, native born and naturally gifted with executive ability, and with loyalty in their hearts for the South,

what may we not expect to see accomplished in the second decade of the present century? Of all our resources, our white boys can be made the most valuable and the most permanent. The best efforts of the South should be directed towards equipping them for the herculean tasks of the future. When the isthmian canal shall have opened wide the doors of the Orient, with its teeming millions of population, the cotton products of the South will swell in volume beyond our highest conceptions.

Of one thing the South is conscious, and that is, the dominant race has never been equalled in honorable achievement. They do not belong to the "holier-than-thou" class. They do not seek to pluck the mote out of their brother's eye before casting the beam out of their own. They are willing to bear and forbear; to be charitable to all; to judge by results rather than by professions. The miserable experiments made by our Northern friends in the management and control of the negro race, if they were not so serious, would be most ludicrous. Whether in their attempts to grow cotton with negro labor or to uplift the negro through educational influences, or to correct his inborn infirmities and to tame his licentious nature by holding him up as the equal of the white man—all have proved dismal failures. It is the height of an overweening self-conceit and arrogance for those who have never been thrown in contact with the negro race to suppose that their untried theories are wiser and better than the methods that have always proved successful in practice.

The people of the North have a problem before them much more serious than the people of the South. If permitted to do so, the South will work out its own racial difficulties with justice and satisfaction to all. It will furnish work to the black man at remunerative wages, which is well-nigh a panacea for all the woes of mankind. While the North has a negro problem, it is complicated in the fact that negroes do not enjoy the same opportunities for work in that section that they do in the South. The North also has its troublesome labor problems, that threaten to disrupt society. A highly intelligent Northern gentleman of Ohio, politically affiliating with the republicans, said to the writer a few days ago: "We have a most serious and complicated state of things in the North. It involves the greatest question that civilization has ever had to deal with. Our capitalists are arrayed against labor, and labor unions are seeking to dictate who shall and who shall not work. When any power whatever can prevent a man from laboring for the support of his family, that power has dominion over his life. We have more to attend to at home in these matters than we can do." In conclusion he said: "The South is the only great conservative part of this nation. It is a bulwark against fanaticism, and the North may yet have to call upon it to protect its people against the lawlessness of anarchy." These expressions were voluntary on his part, and to the writer were surprising, if not alarming.

Let me conclude by saying that, in my judgment, no intellectual agency whatever is doing so much to awaken enterprise and to stimulate development in the South as the Manufacturers' Record. It is a light in dark places, a friend to the friendless, an advocate for the right, and a living force to repel the malignant defamers of the Southern States. May its good influence be perpetual. J. B. KILLEBREW, Nashville, Tenn.

An experiment in raising tobacco to be used for cigarette wrappers is being made near Cynthia, Ky.

## UNIQUE CONDITIONS IN NEW ORLEANS REALTY.

[Special Correspondence Manufacturers' Record.]

New Orleans, La., August 3.

To one at all familiar with the development of other cities throughout the country the present real estate situation in New Orleans is interesting, not to say unique. There is here a steady development in every line—finance, commerce, industries, building and population. One finds here active young men from all parts of the United States who have recently come here to take positions in commercial, financial and industrial institutions, and such facts as are available indicate that the rate of increase in population is greater than it has ever been before. Numerous new factories and industrial enterprises are being established all over the city, and residences of every description are being built in all directions, and in the center of the city some expensive and up-to-date public buildings are being erected. Yet in spite of all these facts there is no great increase in either real estate sales or valuations. As an example, take the new twelve-story Hibernia Bank & Trust Co. building, which is but two blocks from Canal street, the Broadway of New Orleans. This improvement, a modern, up-to-date office building, and such a structure as would greatly enhance the value of surrounding property in most any other city of this size in the country, has had almost no effect whatever on the values of adjacent property.

There seems to be no such thing as established values of properties here. Even on Canal street, which seems permanently destined to be the great retail street of New Orleans, the prices of property even in the same block may be at wide variance. The highest quotations I have heard put on any Canal street property, and that in the very center of the dozen blocks that now constitute the most popular part of the street, is some \$6000 a front foot. Taking the territory between the levee and Basin street, at which latter place it is proposed by the Frisco Railroad to erect a very handsome passenger station, the price of property ranges all the way from \$6000 down to \$1000 and less per front foot; and there are instances where sales have been effected at a price 50 per cent. less than the owner of adjoining property would dispose of his holdings.

The truth of the matter seems to be that each transaction is a law unto itself. It is also true that a large proportion of the choicest business property is not in the market, either through a full appreciation of the present and future value of the property, or because holders are non-residents and are satisfied with the revenue received from rents or leases. Indeed, this non-resident ownership is a feature of the situation that is popularly supposed to militate against activity in real estate transactions. It has been stated to me that at least \$18,000,000 worth of choice business property in New Orleans is owned by non-residents who have left this country and are now living in quiet comfort in France. It is a very rare thing that those owners can be induced to part with their New Orleans holdings.

There is a proposition under way (in fact, bids have been advertised for the work) to pave Canal street with asphalt from the present asphalt limit, a few blocks beyond Basin street, all the way out to the cemeteries, where the shell road to West End commences. Canal street property beyond Basin street is not in great demand at present, and is mostly used for residential purposes. Most of the property in this section is

held at from \$100 down to \$35 per front foot. It would look like there is an opportunity for profitable investments in such property as this.

On the streets on each side of Canal street the maximum price obtained for real estate comes far below Canal street prices, and until one strikes the choice residence section, such as on St. Charles avenue and adjacent streets in the so-called Garden district, the valuations fall off markedly. On most of these side streets, some of which are broad avenues which unquestionably have a future, prices are very largely nominal, dependent entirely on the necessities of the sellers or the degree of anxiety for ownership that a prospective purchaser may show.

Naturally, the river front, where are the public and private wharves and docks, is largely in the hands of owners who appreciate its prospective value and usefulness, and sales of this property are very infrequent. In fact, there is very little activity in real estate anywhere in the city. There are large tracts to the back of the city between the populated part of the town and Lake Ponchartrain that have been or are being ditched and drained, and which will some day come into demand; but these lands have been largely bought up by long-headed operators who foresee that with the growth of the city these lands must come into demand for residence purposes, and they are simply holding them until the time is ripe for putting them on the market.

There have been some residence sections built up through the efforts of real estate operators, notably in the case of Audubon Place, which is laid out on lines similar to those adopted in the very choice residence sections of St. Louis, where the "place" idea seems to have reached its greatest development. It is reported, however, that the sale of lots in Audubon Place was not so active as to present an alluring proposition to real estate men who might have felt inclined to make similar efforts in other directions. However, a very beautiful residence section has been built up there, and, with the increase in population that has set in, it is not unlikely that similar attempts will be made in other parts of the city; for instance, in the vicinity of City Park or along the elevated ground known as the Metairie Ridge.

There are thousands of acres in the territory back of the populated district between the river and the lake which must unquestionably come into use with the demands of increased population. On account of the peculiar water-front line, which gave rise to the name of Crescent City, streets converging from the river practically come to a point near the cemeteries about half way between the river and the lake. This indicates that the old part of the city must be pretty well occupied at no greatly distant date and that the increased population will require the lands beyond for homes.

As \$100 per acre is not an infrequent price for these lands, which, with drainage, are as desirable as any part of New Orleans, it is easily to be seen that there will be some day a considerable activity in this property.

Investors have been for some months quietly looking around for what they considered bargains, and have been taking in such pieces of property as were available and cheap. It may be some time before there is anything like a real estate boom in New Orleans. It is likely that it will come gradually and may never rage fiercely at all; but, with the

sewerage and drainage improvements that are now under way, with the paving operations and with the widespread interest in the proposition to make New Orleans a clean, beautiful, comfortable modern city, there is certain to be a very large improvement in the way of new buildings to take the place of the old residences and warehouses which have done duty here for so many years.

It would seem as though a really company on the lines of those established in New York and elsewhere could be organized and conducted to great advantage in New Orleans.

It is the universal history of cities that when modern buildings begin to be put in the old out-of-date places have to be remodeled in order to escape a tenantless condition. This will doubtless cause a great deal of building and remodeling here in the next few years, both in the business and residence sections, and it would seem that the real estate operators of experience and judgment would find in New Orleans a very profitable field for their endeavors.

With an increasing population, and when extensive building operations are on foot, the conditions are certainly favorable to advancing real estate values. New Orleans' population is now increasing at the rate of about 15,000 to 20,000 a year, and the prospects are that the next few years will show an even greater increase. Vacant residences and store-rooms are infrequent. This much for the increase.

In the way of building there never have been so many important public improvements under way. In addition to the magnificent million-dollar office building of the Hibernia Bank & Trust Co. and the extensive twelve-story addition to the St. Charles Hotel, the Commercial Bank & Trust Co. is erecting a handsome steel office building, the Interstate Trust & Banking Co. has recently moved into very elegant quarters and the Germania National Bank has opened the doors of a handsome new home. Work has also begun on the new parish courthouse for Orleans parish, the ground has been purchased for a million-dollar post-office and capitalists who have bought the old historic St. Louis Hotel announce that they will erect a handsome structure on the site of the present building.

These are some of the improvements now completed, under way or assured. Then there is the new passenger station of the Frisco Railroad that is to cost some millions of dollars, and another passenger station is promised by the president of the Louisiana Railway & Navigation Co. Then there are new factories of varying importance and magnitude, as well as additions to industries already established, and altogether the number, class and importance of new buildings under way here are such as to demonstrate the existence of a notable activity in that line. These facts are significant and of interest to those looking for investments in a live city.

Adjacent to New Orleans there are opportunities for investments in lands that must increase enormously in value. A separate chapter might be written concerning the operations of irrigation companies in this section. Since the great development of the important rice industry in Southwestern Louisiana the question of irrigation and ditching has received marked attention at the hands of local and foreign capitalists. It has been demonstrated that in the swamp lands of Louisiana levees, ditches and pumping plants will make it possible not only to obtain perfectly dry land at any time, and land of the richest possible kind, but through irrigating canals properly constructed a reliable supply of water may



be secured for the dry seasons of the year.

A half-dozen irrigating companies have been formed within the past year to operate in the vicinity of New Orleans, and it is confidently predicted that lands that have had little or no sale heretofore will be in demand at from \$30 to \$50 an acre as soon as the plans for ditching and irrigation have been completed. As the soil of all these lands is alluvial and from 1000 to 2000 feet deep, it is susceptible of raising the finest crops of rice, sugar, truck, etc., practically forever. There is here not only an opportunity for investors, but the promise of increased wealth to this entire section.

The projectors of a number of these enterprises are arranging at this time to lay the advantages of their locations before the farmers of the North, who are expected to come here in increasing numbers during the fall and winter.

There is room for a million more farmers in the territory between Montgomery, Ala., and Western Texas. As the result of the organized efforts of the commercial bodies constituting the Four States Immigration League, and accompanied by the work being done by the Southern Pacific and other railroads in this territory, a large influx of immigrants will undoubtedly be seen here in the next few years. With this trend toward the undeveloped acres of this territory and the further enormous developments that are taking place in New Orleans independently of the growth of the contiguous territory, there will be such an expansion of every feature of New Orleans in the way of business and population that many opportunities for fortunes in real estate operations will be found by operators of experience and judgment.

ALBERT PHENIX.

### CROPS AND PROSPERITY.

#### Their Relations Clearly Shown in Southern Conditions.

Since the publication last week in the Manufacturers' Record of a number of letters from dealers in hardware and machinery operating in the South others have been received emphasizing the bright prospects of the South based upon crop conditions there. Mr. William G. Wilnot of New Orleans, manager of Woodward, Wight & Co., Limited, who has just returned from a six weeks' visit in Texas, Louisiana and Mississippi, writes:

"Texas has made up to date the largest crop of wheat, corn, cotton and rice in her history, and if nothing interferes with the harvesting the farmer will have all kinds of money this fall. The lumber business continues good, prices are being maintained, and from the present outlook the indications are that the oil field will be found to extend from the Rio Grande to the Mississippi. The tide of immigration has set in, the opportunities are there and all they need is developing. Texas is surely great. The only difficulty the merchants have is to get goods to fill their orders.

"In Louisiana we are not so fortunate as Texas. The principal crop, sugar, will be from 30 to 40 per cent. short. The planters are only buying what is absolutely needed to operate the factories, and consequently the machine shops and foundries are doing very little. The rice crop, with favorable weather, will exceed last year by 25 per cent. Cotton, with a fair chance from now on, will be an average crop. The lumber business is on the top wave of prosperity; demand and prices very satisfactory.

"New Orleans is the natural seaport for all the twenty-six States drained by the Mississippi and its tributaries. Commerce gravitates to the sea level the

same as the rivers. With the Rock Island, Frisco and Red River railroads knocking at our door, with the prospects of the business that the building of the Isthmian canal foretells, it is not to be wondered at that all the available river and dock frontage is taken up and that desirable sites for factories and warehouses are bringing fancy prices. Building here, as well as everywhere for that matter, is retarded by the lack of skilled labor and the arbitrary demands of the labor unions. There is a fair prospect of a new steamship line between Baltimore and New Orleans that will operate in connection with the Texas & Pacific, Iron Mountain and other roads of the Gould system.

"In Mississippi the cotton crop will be 20 per cent. short and thirty days late. There is a large increase in the sale of railroad, school and State lands in the delta and lumber regions, and the lumber business in cypress, pine, cottonwood and gum show an enormous increase. A great many manufacturing plants are springing up, including cotton factories, cottonseed-oil mills, ice plants, bottling works, agricultural implements, wagon works, etc., and above all, Mississippi has deep water at last and a thriving seaport, with the best hotel in the South at Gulfport. The times and the prospects in the South, in the writer's opinion, were never better."

C. H. Briggs, manager of the Briggs Machinery & Supply Co., Dallas, Texas, writes:

"The trade conditions in this section are very promising. Sales are larger than at the corresponding time last year. The business outlook is good, which is caused by the good-crop outlook. We have just harvested a wheat and oat crop that goes to the market in fine condition; yield and prices good. The black-land section of Texas will harvest a large hay crop. The melon and fruit crop is also good. The condition of cotton is improving every day. The buyers of machinery are conservative, largely on account of our failure in the crops the past year. The outlook for industrial developments are very flattering. A large amount of new country is taken by new settlers. Money is easy and everything looks very bright and hopeful for continued prosperity in this section."

George K. McLendon, secretary and treasurer of the McLendon Hardware Co., Waco, Texas, writes:

"Business in this section is improving very fast, and as our grain crop and corn crop are the best we have had in years we anticipate a very large business from now on. Our cotton crop is very promising, and with continued dry and hot weather we believe we will make the best cotton crop that has been made since 1900. The general outlook in this section is very promising."

### To Develop Geneva.

The Geneva Industrial and Improvement Association has been organized at Geneva, Ala., for the purpose of inducing immigration and of bringing industries to the community. The officers are Messrs. C. D. Carmichael, president; W. O. Malkey and W. F. Graves, vice-presidents; A. L. Tatom, secretary, and W. K. Kenan, treasurer. The population of Geneva county increased from 4500 in 1880 to 19,500 in 1900. There is hardwood in abundance, and the lands are adapted to the growing of cotton, corn, potatoes, peanuts, melons, cane, fruit and vegetables. The town has artesian water, good schools and cheap transportation by railroad and river. There is an abundance of hardwood in the county.

### INDUSTRIES AT PETERSBURG.

#### More Than Three Hundred Factories in the City.

[Special Cor. Manufacturers' Record.]  
Petersburg, Va., August 11.

There are more than 300 establishments in Petersburg engaged in the manufacture of tobacco, trunks, cotton goods, fertilizers, fruit boxes, flour, snuff, rugs, hats and various other products, and the Petersburg shipyard has recently completed several vessels for the United States government. The value of the products manufactured annually amounts to about \$12,000,000, and about \$2,000,000 is paid out each year to 6800 employees.

Sixty million feet of lumber are handled in this city every year, about 15,000,000 feet of which are used for manufacturing and other purposes in the city. Of this amount about one-half is used in the manufacture of trunks in a factory that covers several blocks and has 252,000 feet of floor space. The daily capacity is 1000 trunks and 200 satchels and traveling bags. The works give employment to from 800 to 1000 operatives.

A conservative estimate is that 75 per cent. of the manufactured plug tobacco sent from the United States is manufactured in Petersburg, and more than two-thirds of this amount is manufactured at the plant of David Dunlop, recently leased by the American Tobacco Co., which for several years has been trying to purchase it. Petersburg has been a tobacco market since colonial days, even before wagons were used for transportation. An average of 15,000,000 pounds of raw leaf is handled annually in this city. The prospects are bright for a good tobacco crop this year, with probably an increase in the amount of bright tobacco brought to this market. Five large cotton mills at Petersburg manufacture many million yards of staple and fancy goods annually.

Petersburg is in the midst of the belt in which the main peanut crop of this district is raised, and from 2,000,000 to 3,000,000 bushels are marketed in this city. They are cleaned, shelled, picked and shipped to all parts of the world. A sale of 50,000 bushels at ninety cents has just been made, and the crop in the hands of the merchants and manufacturers of this city is now smaller than it has been for many years. From the best reports of the leading farmers in the belt the crop this year will be short, due to the lack of proper season and the scarcity of labor. In many sections labor cannot be had at any price, and in others wages two and three times those of two years ago are being paid. In some instances fields after having been planted are left uncultivated.

The jobbing business of this city is also large—equal, in fact, to the manufacturing—and the business done by the manufacturers, jobbers and shippers amounts to about \$30,000,000 annually.

Three trunk lines and steamship lines furnish ample facilities for transportation. Congress last year authorized the expenditure of a sum sufficient to build a channel through which to carry the freshest water of the Appomattox river, by means of which a depth sufficient for ocean-going steamers can be maintained in the Appomattox river.

The chief development going on in Petersburg at the present time is that of the Virginia Passenger & Power Co., which is engaged in work preparatory to converting the water-power of the Appomattox river into electricity to be used for lighting and motive purposes in Petersburg and for motive-power along its suburban line between this city and Richmond. The Goulds are now owners of the controlling stock in the company.

Several hundred thousand dollars have already been spent in the development of the power just above the city, where there is a fall of ninety feet, capable of developing many thousand horse-power. The company has recently become the purchaser of thousands of acres of land up the Appomattox river for a distance of forty miles. At Petersburg it will build a dam about seventy-five feet high at its highest point, and will utilize the property purchased for reservoir purposes in order to have a supply of water that will not fail during the dry summer months. This dam will back water for forty miles, and in some places the narrow stream will be converted into a pond about eight miles wide.

The company is now building a railroad along its canal, the entire length of which is about seven miles, for the purpose of carrying material to be used in the construction of the dam. The road is being built on the tow-bank of the canal, which will be cut out on the berme-bank sufficiently to make the present canal forty feet wide and five feet deep. This work is now well under way, and probably will be completed within a year. W. N. R.

### ARBITRATION IN ALABAMA.

#### Issues Between the Mine-Workers and the Operators.

[Special Cor. Manufacturers' Record.]  
Birmingham, Ala., August 10.

The first arbitration board ever assembled to pass upon disputed questions between Alabama corporations and the men employed by them has been in session here this week. Judge George Gray of Delaware is president, and his associates are William R. Fairley, member of the national executive board, United Mine-Workers of America; T. L. Lewis, vice-president of the same organization; Chas. McCrery, vice-president and general manager of the Tennessee Coal, Iron & Railroad Co., and R. H. Pearson of the Central Coal Co. The board is considering issues between the members of the United Mine-Workers and the coal operators in Alabama. Mr. Fairley and Mr. Lewis are for the miners and Mr. McCrery and Mr. Pearson for the operators. Judge Gray is the umpire. The operators are represented by Gen. Benjamin F. Tracey, Secretary of the Navy under President Harrison; Walker Percy, E. H. Cabaniss, John P. Tillman and S. D. Weakley. All are Birmingham men save General Tracey. Edward Flynn, president of the Alabama division of the United Mine-Workers, was announced as the representative of the miners.

Judge Gray announced that the miners would be allowed three days in which to present their side; the operators would follow in five, and then the miners would be given three days for rebuttal.

E. P. Neill of Washington is recorder, with two stenographers.

The agreement under which arbitration was adopted stipulates that in this way it will be decided what wages will be paid the miners for the year beginning July 1, 1903, and other questions at issue. This will include the two weeks' pay-day. Pending a decision the miners were ordered back to work. If the board decreases the amount now being paid, the men will be charged with the difference; if it increases it, credit will be given. A majority of the board decides. Half the expense of the board will be borne by the United Mine-Workers and half by the coal operators.

The operators demand a sliding scale, as follows: When all grades of iron net \$7.50, 37½ cents per ton for mining coal; \$8, 40 cents; \$8.50, 42½ cents; \$9, 45 cents; \$9.50, 47½ cents; \$10, 50 cents; \$10.50, 52½ cents; \$11 and over, 55 cents.

The miners ask five cents advance on both the minimum and maximum offered, with concessions for narrow work. They also ask an eight-hour day and two weeks' pay.

"It has been demonstrated," say the operators, "that 37½ cents per ton is living wages to the miners. Starting with a living wage to the miner, based on a selling price of pig-iron which yields no profit to the manufacturer, we think the above scale advances the wages of the miners as rapidly as is justified by the earnings of the manufacturer, giving to the miner equitable increased compensation with better prices." It is further urged that competition cannot be met if prices are advanced. Matters concerning yardage are also gone over, as well as day work and provisions to prevent men laying off and stopping the mines. The operators also offered the following sliding scale for adoption: Coal 30 inches or under, 62½ cents; 30 to 36 inches, 60 cents; 36 to 48 inches, 55 cents; 48 to 54 inches, 50 cents; 54 to 60 inches, 47½ cents; 60 to 70 inches, 45 cents.

The sessions are attracting large crowds of leading business men, especially manufacturers.

There seems a disposition in industrial lines to wait until the matters to be arbitrated are settled. Business commercially has felt the return to work perceptibly, but iron has not yet begun to move. Practically no sales have been made for some weeks. Several small lots were contracted for early, but as a whole they do not amount to much. Prices are keeping up well, though no sales are reported. It is thought that at least one corporation in the district is anticipating another cut, but denial is made of knowledge of it. Production is heavy and stocks very large. Five furnaces not now at work will go in pretty soon, say in ten days, and increase the output fully 200 tons each per day. Among these is the big new furnace of the Alabama Consolidated at Gadsden, which will be fired up next week. The furnace at Holton is at work, having started last week.

Business is good with rolling mills, machine shops and foundries. The rolling mills at Bessemer and Gate City are running full time, and the Birmingham mill will soon start. The machine shops are busy making engines to meet the mine and small factory trade, and the foundrymen are crowded with castings to go with them. The steel mill at Ensley will put in converters to almost double the output. All the product of the mill now is going into rails.

Receivers Gillespie and Bush of the Southern Car & Foundry Co. are conferring and examining the books of the company. It is thought that work will soon be resumed at Gadsden and Anniston, at least to clear up material on hand. Further than that no opinion is expressed.

The plow works at Ensley are at work and will soon be up to maximum output.

H. W. L.

#### Rebuilding at Louisburg.

Editor Manufacturers' Record:

Some time since a large portion of our town was burned, and the following parties are rebuilding: Mr. G. W. Ford is rebuilding the hotel, and will need roofing, hotel furniture, etc. The bank is rapidly being rebuilt, and will need counters and full bank furniture; Mr. William Baily is president. Messrs. Hayes & Fuller and K. P. Hill, who had their large sales stables burned, are commencing to rebuild, and will need roofing. F. N. & R. Z. Egerton wish to put in a cash system of some sort, and would like to correspond with parties both as regards the cash-carrier system and also the

basket system for carrying goods to the cashier.

The town has voted to issue bonds for water-works and electric lights, and would be glad to hear from parties along that line. Mr. William Baily, president of the Farmers and Merchants' Bank, is chairman of the board, and all communications should be addressed to him. Mr. J. W. Hollingsworth is thinking of putting in a plant for the manufacture of cheap and medium furniture, mattresses, chairs, lounges, bedstead sets and brooms, and would be glad to hear from parties who have the machinery for same. Messrs. Allen Bros. are building a large stable, and want roofing, sash, blinds and doors. The above and a good many other industries are going up in our town.

F. N. EGERTON.

Louisburg, N. C.

#### Republic Iron & Steel.

In the semi-annual report of the Republic Iron & Steel Co. Mr. Alexis W. Thompson, the president, discussing the operations of the company in the South, gives some interesting points, from which we take the following:

"Ever since the organization of this company it has been the constant aim of the management to increase and improve its producing efficiency, particularly in the lines of ore, coal, coke, pig-iron and steel. The extensive new work done in the Birmingham district, together with the cost of the new steel plant, and of the new continuous mills at Youngstown, of additional coke ovens, of the acquisition and development of ore and coal properties, of extraordinary replacements at rolling mills and blast furnaces, etc., consumed the sum of \$6,066,602.97, shown in the balance-sheet as disbursed for 'new construction' during the last four years. Of this sum almost two million dollars (\$1,918,325.19) have been expended in the Birmingham district alone for the erection of our new No. 3 pioneer furnace, and of coke ovens; for the opening of ore and coal mines, for several hundred new houses, for locomotives, railroad tracks, switches, etc. The wisdom of this investment is shown by the fact that the net profits derived from the Birmingham district exceed the total amount there expended for new construction. The new (No. 3) blast furnace produced during the year last past (July 1, 1902, to July 1, 1903) 80,202 tons of pig-iron, almost equal to the combined product of pioneer furnaces Nos. 1 and 2, and at much lower cost. Pioneer furnace No. 2 was blown out April 1 in order to increase its capacity up to that of No. 3. This work is now completed, and during the next few months pioneer furnace No. 1 will undergo the same change."

The total net profits of the company from all operations during the six months ended June 30 were \$1,356,777.22, from which there was deducted \$714,591.50 for two quarterly dividends of 1½ per cent. each. In the estimate of raw materials owned by the company Southern ore is placed at 70,000,000 tons and Southern coal at 50,000,000 tons.

#### The Inland Waterway.

In an interview at Norfolk Congressman Small of North Carolina, who has been active in promoting the movement for connecting Hampton Roads and Beaufort Inlet by an inland waterway, said that he had obtained facts and figures to show that if the plan were carried out it would mean a monetary advantage to commerce of the Atlantic seaboard from Philadelphia to Jacksonville of about \$2,000,000 annually, in addition to the saving of many lives and vessels.

A deposit of sulphur has been found within five miles of Dallas, Texas.

## FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

#### The Roumanian Market.

Ferrero Bucarest of Bucharest, Roumania, in a letter to the Manufacturers' Record says:

"We are convinced that American manufacturers can have a good market in Roumania, but it would be necessary to have here good honest and reliable agents that could be entrusted with goods in deposit. Depositaries, rather than agents, would be necessary. French, German and English makers are doing here very well working on this system.

"Belting of superior quality, more especially for agricultural purposes, would sell well.

"This country is eminently agricultural, though very much behind times; fertilizers have almost no demand. General agricultural machinery has a large field, as the lands are almost entirely flat and even. In the mountainous part of this country there are a good many petroleum wells. The Standard Oil Co. some weeks ago had some of its agents not prospecting, but trying to make some arrangements with this government and with the proprietors as well in order to make a large exploitation. But it seems that fear of falling into too powerful hands which may monopolize the industry of the country has been the cause why such an enterprising and energetic concern has not succeeded. It is a great pity for this country, as nothing serious will be done, as there does not exist the spirit of good fellowship which can result in powerful concerns.

"General industries are here almost at their beginning. It is enough to state that only now is being erected the first chemical works in the country, as heretofore our sulphuric acid has been brought from Ungheria. Some plants of beet sugar are working, but no big powerful corporations interest themselves in them, so that they go on, living only.

"An Italian capitalist has just arrived, and is going to construct a large hat factory, the very first in Roumania.

"We find the Manufacturers' Record very interesting, and have found in it an interesting advertisement, and we are going to write to the company directly."

#### Wants Cotton Goods.

S. Goldman of No. 7 Heiligegeist strasse, Berlin, Germany, writes to the Manufacturers' Record that he would like to get into communication with American manufacturers of printed cotton goods for decorating, finishing and trimming, printed velvets and velveteens for decorating and smooth, mixed and printed woollens and silk goods for decorating and furnishing.

#### Notes.

Pedro A. Torres of Popayan, Colombia, writes to the Manufacturers' Record that he desires to represent American manufacturers.

Rodrigues, Cardosa & Co. of Lisbon, Portugal, write to the Manufacturers' Record that they desire to establish business connections with America for the handling of novelties and small articles of practical utility.

Lauritz Fischer of Helsingfors, Finland, writes to the Manufacturers' Record that he desires to learn the names of leading manufacturers of car wheels, emery wheels and grinding disks, and also the name of one manufacturer of anti-friction metal "Post zero."

## RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

#### Connecting Three Cities.

The Beaumont, Sour Lake & Port Arthur Traction Co. has been organized at Beaumont with \$300,000 capitalization to take over the rights and holdings of the Beaumont & Sour Lake Construction Co., now building an electric line from Beaumont to Sour Lake. It is announced that the new company, instead of merely building the line at first planned, will also build from Beaumont to Port Arthur. Mr. G. W. Meeker, president and general manager of the Beaumont & Sour Lake Construction Co., writes to the Manufacturers' Record regarding the plans as follows:

"We connect with Sour Lake twenty miles distant from Beaumont, and also go through Spindle Top to Port Arthur, connecting us with two of the largest oil territories on the continent. With the freight and passenger traffic that this road will have to handle, together with good management, I believe it is destined to become one of the most important interurban systems in the United States as a dividend-payer on the capital invested."

#### Extension Near Completion.

Mr. H. W. Johnson of Savannah, Ga., secretary and treasurer of the Chattahoochee & Gulf Railroad Co., whose line extends from Columbia, Ala., on the Central of Georgia Railway, through Dothan to Sellersville, about sixty-seven miles, informs the Manufacturers' Record that the 24-mile extension of the road beyond Sellersville, which has been under construction for some time by the Central of Georgia Railway, is now almost completed and will be leased to the Central of Georgia Railway Co. under the provisions of the lease of the present main line. It is expected that the terminus of the extension will be at Florala, Ala. The estimated cost of construction of the extension is \$210,022, about \$8750 per mile. The cost will be met by an additional issue of the capital stock of the Chattahoochee & Gulf Railroad at par and by the issuance of first mortgage bonds drawing 5 per cent. interest and at a rate not exceeding \$4500 per mile.

#### Railroads at Birmingham.

Discussing the growing importance of Birmingham, the Wall Street Journal says:

"Birmingham is fast becoming the leading railroad center of the Southern States. There are now practically six trunk lines entering this city. These are the Louisville & Nashville, the Southern, the Frisco, the Central of Georgia, the Queen & Crescent and the Seaboard Air Line. The Seaboard has not quite finished its extension, but is working hard at it, and expects to have trains running into Birmingham by January 1, 1904. In addition to these trunk lines, there are other smaller roads in the district, such as the Birmingham Mineral and the Birmingham Southern, which handle a great deal of coal and ore traffic. The Birmingham Belt, which belongs to the 'Frisco, and which extends around the city, is a prominent factor in handling the freight traffic of the city and the district. The city of Birmingham will soon have a direct route to Chicago by way of the Illinois Central, which is building an extension to Birmingham via Sheffield. Considerable attention is also being given just now to the proposed Birmingham, Huntsville & Gulf Railroad. This is as yet only planned, but there are chances that ultimately a road will be built from Birmingham to the Gulf. All



the Alabama railroads have just experienced a year of unsurpassed prosperity. Not only have the roads in the Birmingham district felt this prosperity, but even the smaller roads in the remote parts of the State show increased profits."

#### Railroad Earnings.

The gross earnings of the Seaboard Air Line Railway during the past year were \$12,706,527.82, an increase over the preceding year of \$1,126,712.45; operating expenses and taxes, \$9,318,778.90, an increase of \$1,174,558.75, and net earnings, \$3,387,748.92, a decrease of \$47,846.30.

The gross earnings of the Central of Georgia Railway during the past fiscal year were \$9,164,470, an increase over the preceding year of \$1,413,779; the expenditures and taxes were \$7,092,549, an increase of \$1,292,039, and the net earnings were \$2,071,921, an increase of \$221,740.

The gross earnings of the Nashville, Chattanooga & St. Louis Railway during the past fiscal year were \$9,606,370.11, an increase over the preceding year of \$1,613,839.21; operating expenses, \$6,955,603.65, an increase of \$1,133,489.37, and net earnings, \$2,650,766.46, an increase of \$240,349.84.

#### Two Railroad Purchases.

A meeting of the stockholders of the Knoxville & Ohio Railroad Co. has been called for Knoxville on October 7 next to vote upon a proposition to create a first consolidated mortgage upon the property of the company and upon a proposition to purchase the Tennessee Northern Railway Co. This meeting is understood to be for the purpose of ratifying a deal involving the purchase of the Knoxville & Bristol Railroad and of the Tennessee Northern Railway by the Knoxville & Ohio Railway, which is controlled by the Southern Railway. The Knoxville & Bristol connects Morristown and Corrytown by a route of forty miles, and the Tennessee Northern has about twenty miles of track from LaFollette Junction, on the Knoxville & Ohio, through LaFollette into the Clear Fork coal fields.

#### New B. & O. Passenger Cars.

Leading railroad companies are already preparing to handle the passenger traffic for the St. Louis Exposition. A part of this movement is the contract awarded this week by the Baltimore & Ohio Railway Co. to the Barney & Smith Co. of Dayton, Ohio, for forty passenger cars and forty baggage and postal cars involving an expenditure of about \$600,000. Deliveries on this order are to begin in September and to end by April 1 next. During the past two years, with the growth of its passenger traffic, the Baltimore & Ohio has added 100 cars to its equipment, and this year twenty passenger engines will be added.

#### In the Washita Valley.

Mr. John B. Harrison of Cheyenne, Okla., president of the Cheyenne & Washita Valley Railway Co., writes to the Manufacturers' Record that his company proposes to build a road from Chicasaw, I. T., to some point on the line of the Santa Fe in the Panhandle of Texas, a distance of about 180 miles. Nearly the whole line will be through the Valley of the Washita, one of the richest stretches of land west of the Mississippi river. It is expected that a surveying corps will be put into the field in a few days and that the work of construction will be pushed.

#### To the City of Mexico.

Frank E. Grimes, financial agent in Kansas for the Kansas City, Mexico &

Orient Railroad, is authority for the statement at Kansas City that within eighteen months the line will be in operation from Kansas City to Eagle Pass, where connection will be made with the Mexican International Railroad for the City of Mexico. In Texas the road has been graded from the Red river to Sweetwater, and the grading is being pushed toward San Angelo, while a surveying party is locating the line from San Angelo to Brownsville.

#### Quick Time for Truck.

Provided certain conditions as to hauling freight on Princess Anne avenue within the city limits and as to tunneling Smith's creek are met, the Chesapeake Transit Co. of Norfolk, it is expected, will haul freight from Cape Henry to Norfolk. Plans for a big pier at Cape Henry were made some time ago. Another project connected with the movement is to haul the products of Princess Anne and Norfolk counties direct to the cape to be loaded on steamers for the North, thus saving about three hours' time.

#### Seaboard Into Anniston.

General Manager Barr of the Seaboard Air Line is quoted by Mr. D. B. Lacy of the Alabama Construction Co., who is doing grading for the Seaboard, that cars are expected to be running over the Seaboard from Atlanta to Birmingham about the first of next year, and that immediately thereafter the company will look into the construction of the road into Anniston.

#### For Washington Terminals.

In a letter to the Manufacturers' Record Edward Brady & Son, to whom has been awarded the contract for the Baltimore & Ohio freight terminals at Washington, part of the comprehensive plan for the great union depot in that city, write that the work will be done under the supervision of the railroad engineers, and that as yet the subcontracts have not been let.

#### A New Belt Line.

Mr. J. J. McAlester of South McAlester, I. T., writing to the Manufacturers' Record regarding the incorporation of the McAlester Terminal & Transit Railway Co., just incorporated, says that the company proposes to build a belt line around McAlester and South McAlester, and also to build to a point thirty miles southwest, and also to Sleight, forty miles northeast.

#### For Lumber Purposes.

Mr. J. B. Johnson of Willow Springs, N. C., writing to the Manufacturers' Record in regard to the recently-chartered North State Railway Co., says that the road is to be used mainly for logs and lumber. It will have connection at Johnson's Mills with the Raleigh & Cape Fear Railway, and at Angier with the Cape Fear & Northern Railway.

#### Illinois Central Into Ensley.

It is reported that the Illinois Central Railroad has made arrangements with the 'Frisco System to use its tracks from Memphis to Birmingham to enter the Birmingham district, with Ensley as the objective point, and that in return the 'Frisco System will use the Illinois Central tracks from Memphis to New Orleans.

#### Relaying With Steel.

The Texas & Pacific Railroad will soon have its entire line to El Paso, Texas, laid with heavy steel. It is putting in three long sidetracks between Dallas and Fort Worth, in addition to other long sidings, with the ultimate purpose of giving a

double-track line between Dallas and Fort Worth.

#### Railroad Notes.

The 'Frisco will soon begin the construction of its switching yard in West Memphis.

The Central of Georgia Railway has declared a 5 per cent. dividend on its first income bonds.

Along the tracks of about forty-five miles of terminals at Memphis, Tenn., are between 700 and 800 industries.

The Tennessee railroad commission reports the value for assessment of railroad property in the State as \$58,526,550.

The Louisville & Nashville Railroad has let the contract for the building of yards at Corbin, Ky., at a cost of \$50,000.

The Louisville & Nashville Railroad Co. has ordered twenty new locomotives, which are expected at New Decatur, Ala., not later than October.

To make effective a plan for its operation by private parties, it is proposed to incorporate the railroad owned by the State and operated in connection with the iron foundry at Rusk, Texas.

Mr. W. H. Fox, superintendent of the Tennessee Central Railroad, expects to have trains running into Clarksville in September and the road in operation between Nashville and Hopkinsville by October 15.

Citizens of Pittsboro, N. C., are arranging to secure the right of way for the Durham & Charlotte Railroad through the town on its way to Greensboro and Durham, free of cost to the railway company.

Elections have been ordered in Wake, Johnston, Greene, Pitt and Nash counties, North Carolina, September 22 to determine whether or not subscriptions shall be made to the stock of the Raleigh & Pamlico Sound Railroad.

A force of the Atlantic & Birmingham Railroad is at work at Tifton, Ga., grading for a connection of the Tifton & Northeastern and the Tifton, Thomasville & Gulf railroads, which will give a through line from Fitzgerald to Thomasville.

The report has been revived that the Louisville & Nashville Railroad, which is busy improving the Atlanta, Knoxville & Northern road, will build a branch from Wetmore, near Ducktown, Tenn., to Boyce, on the Western & Atlantic road, by which the Louisville & Nashville will enter Chattanooga from Wetmore.

Pactow Brothers of No. 5 Scheuren street, Duesseldorf, Germany, write to the Manufacturers' Record that they desire to get into communication with American manufacturers of apparatus for the recovery of oil from the condensate-water.

Nine building and loan associations are in successful operation at Columbia, S. C. It is estimated that more than \$1,000,000 worth of property has been added to the community through their agencies.

The North Carolina corporation commission has valued for assessment for 1903 the 3834.21 miles of railroad in the State at \$70,012,348, an increase over 1902 of \$27,385,089.

The sales in the Joplin, Mo., district during the week ended August 8, were 9,081,490 pounds of zinc ore and 966,340 pounds of lead ore, valued in the aggregate at \$185,165.

Hendersonville, N. C., has shipped this season \$55,000 worth of tanbark in addition to lumber and crossties.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

#### Better Baling Demanded.

The Manchester Guardian, in discussing the damage to cotton by bad packing and compressing, says:

"We hold no brief here for the round or the square bale and offer no opinion as to their relative spinning merits; that is a question for the spinner. But we are assured (and Liverpool underwriters should be able to confirm the statement) that the claims for country damage this season (a record one for square-bale cotton) have been infinitesimal on round-bale cotton. The round bales are pressed only once, and that as the cotton comes direct from the fields, and so the main cause of country damage is removed. By discriminating in favor of the densely-packed round bale the insurance companies would, it is argued, probably cause a rapid improvement in the packing and also the covering of the square bale. The present wasteful system certainly inflicts loss upon spinners in many indirect ways, and they will be handicapped still further in competition with American spinners if enhanced premiums to cover the country damage risk be demanded for cotton exported to Europe. In this matter underwriters, merchants, spinners and consumers of cotton have identical interests which they would do well collectively to protect."

#### For Mills in Arkansas.

Dr. Henry S. Hartzog, formerly president of Clemson College, South Carolina, and now president of the University of Arkansas, and Messrs. H. K. Wade and Bruce Holcombe, bankers, of Fayetteville, representing business men of Western Arkansas, are spending a couple of weeks among the mills of the Piedmont South collecting information for the furtherance of the textile industry in Arkansas. This visit is attracting wide attention, and it is thought that if the committee discovers facts justifying the undertaking no trouble will be experienced in raising funds for the erection of a large mill in Fayetteville, the first in a chain of factories for the Ozark mountain region, where there is said to be a sufficient supply of labor available. During Dr. Hartzog's administration of Clemson College the textile school was established at that institution, and he is now interested in adding such a department to the University of Arkansas.

#### A Large Shipment.

Messrs. Sanger Bros. of Dallas, Texas, made a large shipment of cotton duck manufactured in their State, last week. The shipment consisted of twenty-six carloads of cotton duck to be used in manufacturing sacks for picking cotton. There were 1400 bales, each containing 800 yards, a total of 1,120,000 yards, and this product goes to points in Texas, Indian Territory and Oklahoma Territory, nearly all within a radius of 100 miles of Dallas. The shipment is valued at about \$100,000.

#### Textile Notes.

It is reported that Hawkinsville (Ga.) Cotton Mills will add 1500 spindles and forty looms.

Black Rock Knitting Co. of Hagerstown, Md., contemplates establishing a

branch knitting mill at Berkeley Springs, W. Va.

It is reported that Hillsboro (Texas) Hosiery Mills will double the capacity of its plant in the fall.

It is proposed to build a cotton mill at Tennile, Ga., and C. J. Burton is interested in the enterprise.

It is rumored that the Sladen-Kirksey Woolen Mills of Waco, Texas, will establish a branch at Louisville, Ky.

Mandeville Cotton Mills of Carrollton, Ga., has suspended operations for several weeks, and will install additional equipment in its weaving department.

Efforts are being made for the organization of cotton-mill companies at Athens, Ga.; Marshall, N. C., and Seneca, S. C., but the enterprises cannot as yet be announced as definite.

The business men of Corinth, Miss., are organizing a company to build a 5000-spindle cotton factory. A capital of \$125,000 is proposed. Names of the interested parties not announced as yet.

Museogee Manufacturing Co., Columbus, Ga., will build a new dyehouse for a long chain system and raw stock, in connection with additional mill, to cost \$200,000, mentioned at length last week.

End Cotton Mills of Hillsboro, N. C., is increasing its floor space to provide for the installation of looms. Heretofore the company has manufactured only yarns, but is preparing to install complement of weaving for its 10,000 spindles.

The Catawba Power Co. of Fort Mill, S. C., has an offer from capitalists for the establishment of a large cotton mill at Charlotte, N. C. This plant will be established, provided the power company arranges to transmit electricity from its plant, now building at Fort Mill, to Charlotte.

Nothing definite has been decided concerning the location of the silk mill recently mentioned as contemplated at Charlotte, N. C. Several Eastern manufacturers have been investigating the Southern field with a view of locating, and Charlotte is one of several cities under consideration.

Oklahoma Duck & Waterproof Manufacturing Co. of Oklahoma City, O. T., has been incorporated, with capital stock of \$50,000, by Messrs. Joseph S. Patrick, W. P. Conner and George W. Patrick of Oklahoma City, and Charles C. Henderson of St. Louis, Mo., for manufacturing cotton duck and waterproof goods.

Arrangements have been made for organizing the cotton-mill company, previously reported, as proposed at McCormick, S. C. B. F. Mauldin of Anderson, S. C., is promoting the enterprise. Messrs. C. R. Makepeace & Co. of Providence, R. I., will be the engineers in charge. No other details have been finally determined as yet.

Reports state that S. F. Harrill, manager of the West Cotton Mills, West, Texas, and his associates will establish a large cotton factory at Marble Falls, Texas. It is stated that South Carolina capitalists have offered to subscribe \$100,000 to the enterprise. Plans for the enterprise contemplate utilizing buildings already erected at Marble Falls for a textile plant.

Virginia Consolidated Milling Co. of Petersburg, Va., has taken formal legal possession of the Blue Ridge Cotton Mills and the Cockade City Mills. About \$25,000 is the price paid for the Blue Ridge plant. The Virginia Company was announced several months ago as chartered for the purpose of acquiring Petersburg cotton mills, and it now owns five plants in that city. It is reported that several

of the plants will be extensively enlarged and improved in the near future.

The Bailey-Arnold Manufacturing Co., which was reported as organized last month at Athens, Ga., is the company referred to last week by Messrs. Thomas S. Bailey & Co. in their published letter. It is proposed to invest about \$50,000, installing an equipment for the manufacture of cotton cord, twine, rope and webbing. About 2500 pounds of cotton will be consumed daily. The company is desirous of securing machinery required for its enterprise, and invites estimates from the leading manufacturers.

It is stated that the Messrs. Holt, Williamson and their associates will organize a company to combine a number of cotton mills. At present the Holt mills sells the products of the various plants, maintaining offices in Worth street, New York city, and it is believed that a closer combination of the mills is proposed. The mills in question are the Alamance, Aurora, Carolina, Elmira, Glencoe, Lakeside, Windsor and E. M. Holt mills at Burlington, Holt-Morgan, Holt-Williamson and the Tolar, Hart & Holt mills at Fayetteville, and the Dalgado Mills at Wilmington, all in North Carolina.

#### QUOTATIONS OF COTTON YARNS.

By Buckingham, Paulson & Co., New York, Philadelphia and Chicago, August 11.

No. 10s-1 and 12s-1 warps.....	18 6/18 1/2
No. 14s-1 warps.....	18 1/2 6/18
No. 16s-1 warps.....	19 1/2 6/18
No. 20s-1 warps.....	20 6/18
No. 22s-1 warps.....	20 1/2 6/18
No. 24s-1 warps.....	21 1/2 6/18
No. 26s-1 warps.....	21 1/2 6/18
No. 28s-1 warps.....	21 1/2 6/18
No. 30s-1 warps.....	21 1/2 6/18
No. 32s-1 warps.....	21 1/2 6/18
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shipments of lumber from Georgetown for the month of July were up to the average. The combined shipments for July of the Atlantic Coast Lumber Co., the Gardner & Lacey Lumber Co. and the Winyah Lumber Co. by vessel and rail aggregated 12,250,000 feet board measure. These figures do not include lumber manufactured into shingles and laths or shipments from mills operating on streams tributary to Georgetown.

#### Norfolk.

[From our own Correspondent.]

Norfolk, Va., August 10.

The movement in this section among lumbermen has been fairly active during July, but the volume of business is still short of what was expected for that month. The situation in North Carolina pine is becoming more satisfactory, as there is a prospect of labor troubles in the North being settled. The demand for lumber so far this month has shown an increase in certain lines, and there is a better cargo business and also a fair demand from Europe. Shipments by rail are also improving, and the general tone of the market is firm for all desirable lumber. The weather in the interior has been quite unfavorable for logging, being very wet and restricting the supply of timber at the mills. The local demand for lumber is now quite brisk, and for all building material there is a good inquiry. From the present outlook the indications are that large quantities of lumber will be absorbed this fall in city and suburban buildings and improvements. Planing mills are very busy at present, and all dressed lumber is in good request, with prices very steady, especially for the better grades. All woodworking shops here are doing more than an average business, and box and crate factories are well supplied with orders. In hardwoods the movement is of fair volume, and there is a good demand for oak, ash and other hardwoods. Poplar is in good supply, with values steady, and the demand fairly active. There is a good inquiry for cypress, and the market is a shade firmer. Lumber freights continue steady, and rates to Northern and Eastern ports are unchanged.

#### Mobile.

[From our own Correspondent.]

Mobile, Ala., August 10.

The timber market continues to show a firm tone, both in sawn and hewn timber. Stocks of sawn timber are being considerably reduced by the large outward movement, and manufacturers are firm holders at 17 cents at the mills, which is equal to 18 cents f. o. b. Mobile. Sawn timber is quoted at 17½ to 18 cents per cubic foot, 40-foot basis, and hewn timber is steady at 16½ to 17½ cents per cubic foot, with stocks very light, there being little made at present. Hewn oak is in good demand at 20 to 22 cents per cubic foot, and poplar at 14 to 15 cents. The log market is easy; all the mills here have a limited supply, while interior mills have a full supply. The lumber market is fairly active, with all the mills, both here and at adjacent points, well supplied with orders. The Cuban demand is not urgent, while the South American trade is quite brisk, and the output along the Gulf ample for the demand. During the past week the following shipments were reported: British steamship Forest Castle for St. Nazaire, France, with 4117 cubic feet of hewn timber, 312,000 feet of sawn timber, 105,000 feet of lumber; for Cardiff, Wales, 25,828 cubic feet of hewn timber, 1,153,224 feet of sawn timber and 36,000 feet of lumber; steamship Sabine for New York with 250,000 feet of lumber; steamship Virgin de Lourdes for Antwerp with 255,701 feet of lumber, and steamship Cloverdale for

West Hartlepool with 1,609,644 feet of timber and 700,436 feet of lumber. At Pensacola the timber market is firm, with a fair demand, and conditions generally satisfactory. The outward movement is very heavy; a number of vessels, both steamers and sailers, are in port, and the exports for the present month are likely to be larger than last. The British steamer Romsdal, 1177 tons, has been chartered by the C. C. & J. R. Mengel Co. of Louisville, Ky., to make four trips from Belize to this port with cargoes of mahogany logs. The vessel on these four trips will handle 8000 logs for the company, which are now being imported through Pensacola and shipped to Louisville. The steamship Poplar Branch completed her cargo at Pensacola and cleared with 3,438,172 superficial feet of timber and lumber for Hamburg. About 2,000,000 feet of her cargo was taken on at Mobile before she came to port. The cargo was shipped by the Sutherland-Innes Co.

#### Memphis.

[From our own Correspondent.]

Memphis, Tenn., August 10.

The general lumber market in this section is in a fairly healthy condition for this period of the season. The volume of trade is considered a good average, although in some departments matters are quiet, while prices are generally firm and higher than usual at this season. Reports from the milling sections show considerable activity among the mills, which are nearly all working up to their full capacity. In logging camps the wet weather has retarded operations, and with a scarcity of labor the supply is somewhat lessened. There is, however, a good show of timber, and mills are generally well supplied. The demand for hardwoods is fairly active, and for export the situation shows considerable improvement, while foreign buyers show more disposition to meet the views of exporters as to prices. The offerings of quartered red oak are moderate, and the market strong. There is a scarcity of plain sawed red and white oak. Cottonwood is rather quiet for the better grades, while for common and culls the market is firm at \$17 to \$19 per thousand. Poplar and gum are both slightly easier, with the demand not so pronounced. Manufacturing concerns are acquiring some valuable lands in the Delta, and will establish large plants at once. Among those reported are the following: A tract of 5500 acres in Leflore county, Mississippi, sold last week to the firm of Ruecker Bros., which is composed of W. J. Ruecker of Lawrenceburg, Ind., and J. J. Ruecker of Murfreesboro, Tenn. This property is rich in white oak and gum, and the new owners will locate a number of saw-mills at once to manufacture lumber. The Roundaway Company, composed of high officials of the Illinois Central Railroad Co., and managed by Capt. A. A. Sharp, has sold the timber on 10,700 acres of land lying in the vicinity of Mattson, Coahoma county, Mississippi, to the Standard Wheel Co. of Terra Haute, Ind. That concern will at an early date establish a factory at Mattson, erect houses for employees and manufacture wheels of all descriptions. It is the purpose of the Roundaway Company to clear up its lands as rapidly as possible, and as fast as the Standard Wheel Co. shall cut off the timber the ground will be turned back to Captain Sharp to prepare for cultivation.

#### Lumber Notes.

J. F. Hart, representing the Weiss & Leish Co. of Muncie, Ind., is investigating with a view to locating a spoke factory in Columbus, Ga.

The Owensboro Lumber Co. of Owensboro, Ky., has been incorporated, with a

capital of \$15,000, by Guy M. Deane, J. W. Cottrell and Edward Deane.

The shipments of lumber from the port of Fernandina, Fla., during the month of July amounted to 12,073,630 feet, and of crossties, 59,750, making a total of 14,463,630 superficial feet.

It is stated that the Paducah Cooperage Co. of Paducah, Ky., is about to establish a branch factory in that city. A site has been selected and the factory building will be erected in a few weeks.

The shipments of wood products from the port of Mobile during the past week were as follows: Hewn timber, 29,945 cubic feet; sawn timber, 3,074,868 superficial feet, and pine lumber, 1,437,126 feet.

The United States Stave & Lumber Co. of Maury county, Tennessee, has been chartered, with a capital stock of \$10,000. The incorporators are M. E. Wheeler, F. S. Wheeler, E. Dan Smith, John W. Fry and Percy S. Chandler.

The Tallulah River Lumber Co. of Atlanta, recently incorporated with \$150,000, has purchased 50,000 acres of timber lands in Rabun and Towns counties, Georgia, and Clay county, North Carolina, but will not develop same at once.

The Hughes Boom & Lumber Co. of Parkersburg, W. Va., has been incorporated, with a capital of \$25,000, for constructing lumber booms, piers, dams, etc. The incorporators are George A. Ecker, Edwin L. Davidson, Charles E. Vandevender and others.

The Fredericksburg Spoke Works of Fredericksburg, Va., has purchased the Landram Wagon Works and will consolidate, operating the two plants under one management. A brick addition is being erected and the capacity of the plant will be increased.

The Pamlico & Neuse River Timber Co. of Newbern, N. C., has been chartered, with a capital stock of \$125,000, of which \$50,100 is subscribed. The incorporators are D. W. Greene, D. J. Nysewander, C. H. Mills of Toledo, Ohio, and O. H. Guion of Newbern.

The Southern Alabama Lumber Co. has been organized at Mobile, Ala., and will erect a mill for the development of timber lands near Hammac, Ala. The officers of the company are: Herman A. Wefel, president-treasurer; Walter S. Reitzell, vice-president, and H. H. Maschmeyer, secretary.

The Ragley Lumber Co.'s planer at Tarpsen, Texas, was destroyed by fire last week. The total loss is estimated at \$25,000, with a partial insurance. Machinery men have been wired for, and a new plant will be bought and placed in running order in forty days. The saw-mill continues to run as usual.

A meeting of cypress-shingle manufacturers was held in New Orleans last week and discussed shingle prices. Representatives of mills in Louisiana, Arkansas and Mississippi were present. The result of the meeting was that prices have been advanced, and cypress shingles now vary from \$1.35 to \$3.25, according to grades.

August H. Wiedman, Otto Moser and W. A. Kreft of St. Louis, Mo., have purchased the Queen City Cigar Box Factory at St. Joseph, Mo. The plant will be enlarged to ten times its present capacity. The new owners will handle their Western trade from St. Joseph when the new plant is placed in good working order.

A most valuable mahogany log was received at Pensacola last week on the Spanish steamer Ida. The log is thirty-four feet in length and twenty-seven

inches in thickness, and valued at \$2800. It was purchased in Africa for the firm of C. C. & J. R. Mengel of Louisville, Ky., and is of the variety known as the figured mahogany.

The steamship Poplar Branch cleared last week from Pensacola, Fla., with a cargo consisting of 3,438,172 superficial feet of timber and lumber. The shipment was made by the Sutherland-Innes Co. and goes to Hamburg. About \$2,000,000 feet of the cargo was loaded on the steamship at Mobile before she came to Pensacola.

The L. T. Cottingham Lumber Co. of Maxton, N. C., with a capital of \$50,000, has been chartered to carry on a general lumber business, to manufacture all kinds of lumber and buy and sell timbered land in North Carolina and other States. The incorporators are L. F. Cottingham, Mr. Carter and John H. Cook, all of Maxton.

The British steamer Romsdal, 1177 tons, has been chartered at Pensacola, Fla., by the C. C. & J. R. Mengel Co. of Louisville, Ky., to make four trips from Belize to Pensacola with cargoes of mahogany logs. The vessel on these four trips will handle nearly 8000 logs for the company, which are now being imported through Pensacola and re-shipped to Louisville.

The Marie Wood Distilling Co. of Elise, Moore county, N. C., was chartered last week, with a capital stock of \$15,000, of which \$5000 is subscribed. The company will manufacture by the process of distillation and deal in spirits of turpentine, tar, wood alcohol, etc. The incorporators are John B. Lening, Bridesburg, Philadelphia, Pa.; Cyrus Borgner, Philadelphia, Pa., and John L. Tull of Gulf, N. C.

A new stock company was organized last week at Apopka, Fla., under the name of the Consumers' Lumber & Veneer Co., with a capital of \$100,000. It will absorb the plants of the Starbird Lumber & Veneer Co. Apopka, A. C. Starbird of Forest City, and also a large plant near Acadia, the latter to be improved and operated by the company in connection with the plant at Apopka, which is also to be greatly enlarged.

The lumber and timber exports from Pensacola, Fla., during the month of July were larger than any previous month during the past or present year, and the indications are that the present month will exceed in the number of feet shipped abroad any month within the past five years. The exports last month consisted of 20,389,000 superficial feet of seasoned timber, 17,000,000 superficial feet of lumber and 83,000 cubic feet of hewn timber. Steamers now loading in the harbor will carry out fully thirty million feet, while the charter list shows that the present outward movement of wood products will continue for some weeks.

The Concatenated Order of Hoo Hoo, the membership of which is composed of prominent lumbermen of the United States, will meet in its twelfth concatenation at Buffalo, N. Y., on September 9. Elaborate preparations have been made by the committee for the entertainment of members and their lady friends. The program of the entertainment is scheduled to open with a reception to visitors on Tuesday, the 8th, with a banquet in the evening. From Tuesday until the close meetings of the order will be held; tally-ho and trolley rides to points of interest adjacent to Buffalo, notably to Niagara Falls, and a visit to the Canadian side will be given. It is expected that this will be one of the most important meetings of the order in its history.

## MECHANICAL.

### The Stocker Cooling Tower.

The cooling tower herewith illustrated is the result of long and studious experience, and embodies essential improvements on former inventions of a similar nature.

The principles involved in reducing the temperature of water, i. e., the methods by which refrigeration is effected in this



THE STOCKER COOLING TOWER.

tower, are: Radiation, contact with cold air and evaporation.

Of these evaporation is by far the most potent factor, and the one on which the efficiency of the apparatus in the first place depends, although the cooling process is to a considerable degree assisted by the incidental action of the two other agencies.

With every pound of water converted into vapor about 1000 units of heat (B. T. U.) are absorbed from the remaining body of water.

Evaporation proceeds only from the surface of fluids. It is accelerated by a rapid removal of the air which, in contact with the liquid, has become saturated with moisture.

The device aims consequently:

First. At the spreading of the water over an area large enough to expose every particle during a sufficiently long time to the action of the air, and

Second. At the circulation over the cooling or evaporating surfaces of a large volume of air, both with a minimum expenditure of power.

These purposes are most successfully attained by the construction of the tower.

The apparatus consists of a tower-like structure (built of wood, steel or bricks, as circumstances may require), encasing the cooling surfaces, which are made up of checker-work or crosspieces of boards in horizontal layers, set at right angles to each other and provided between their intersections with upright oblique partitions.

The water, led to the top of the tower, trickles down over these surfaces in a thin film, which is broken up at each intersection of the boards, and is thus brought in the most intimate contact with the current of air that is forced through the tower in opposite direction.

The fans at the base of the tower are mounted on one steel shaft, which runs in self-adjusting, ring-oiling bearings. They may be driven by any convenient source of power from a line shaft or by a small steam engine or electric motor directly connected to the fan shaft. By using two fans the air is more equally divided throughout the tower, assuring evaporation in all parts uniformly at the highest rate.

A further advantage of the application of two fans is that they can be run at lower circumferential speed, and that, therefore, less driving power is required

for the same amount of air discharged.

The contrivance by which the water is distributed on top of the tower consists of a system of funnel-shaped troughs of galvanized iron, so constructed and arranged that the water flows evenly proportioned over the cooling surfaces, be the load great or small. The occurrence of dry spots on the cooling surfaces is entirely eliminated. Besides, the troughs are not subjected to clogging by sediments of impure water, as perforated pipes are, and can be cleaned easily.

The gallery surrounding the cooling tower serves the double purpose of making the distributing apparatus accessible for inspection and cleaning and of preventing the water from splashing over the outside walls of the tower.

The basin beneath the tower in which the cooled water draws and from which

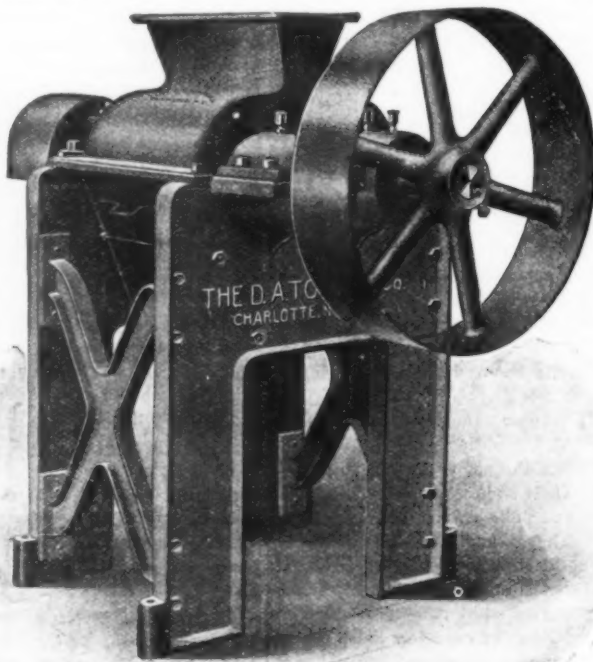
tower to be run under favorable atmospheric conditions without fans or at slower speed of the latter.

The Stocker Cooling Tower is built in every size and capacity, from 50,000 gallons per diem up to 1,000,000 and more. The limit is drawn principally on consideration of the expenses of running the tower, i. e., the power required for pumps and fans, which in a certain size of the apparatus reaches the point where it is more expensive to operate one tower than two of half its size.

This tower is offered to users by George J. Stocker, the patentee and manufacturer, 2833 South Kingshighway Boulevard, St. Louis, Mo.

### A New Oilcake Cracker.

Manufacturers of oilcake will be interested to hear that a new oilcake cracker



A NEW OILCAKE CRACKER.

it is led to the condensers is, according to the location of the tower, either built of concrete or bricks, or consists of a steel pan of adequate size and depth. In both instances it has to be so constructed that a ready separation of the water from the impurities it may contain takes place, and that the latter can be removed easily.

Such is the Stocker Cooling-Tower, of which an important feature is its relatively light weight, which permits the tower to be set up where it gives the best results, immediately above the condensers, without necessitating the construction of expensive foundations.

Although the efficiency of the apparatus is entirely independent of its location, being the same whether the tower is erected on the ground or on top of a building, its usefulness is obviously impaired if the cooled water has to be pumped through long pipe lines, where it becomes heated again before it reaches the condensers.

Size and height of the cooling tower are so proportioned as to warrant the greatest effectiveness at lowest operating expenses.

The power required to pump the water the height of the apparatus averages less than one-half horse-power per 100,000 gallons, while the cost of driving the fans is reduced to the minimum, owing to the fact that the natural draft generated by force of the difference in temperatures and specific gravities of the air in the chimney-like air spaces formed by the evaporating surfaces allows the cooling

is being put on the market by the D. A. Tompkins Co., of Charlotte, N. C.

It is claimed that this new cracker requires far less power than any heretofore built. The cake is cut up by hardened steel saws, and not mashed as heretofore. Quite a number of these machines were put on the market last year, and the reports of their work are all favorable.

Users desirous of investigating further regarding this new machine are invited to correspond with the manufacturers.

### York Ammonia Fittings.

The ammonia fittings manufactured by the York Manufacturing Co. of York,



YORK AMMONIA FITTING.

Pa., are used extensively in the ice and refrigerating field. One of the strong arguments which the company presents in favor of the fittings is that they are manufactured in its own factory, and a suffi-

cient supply kept in stock to fill all orders at a moment's notice. The company also makes special fittings to order. One of the regular valves is shown in the accompanying illustration. The company also builds the Standard York machine, of national reputation, over 400 of which have been installed during the past five years, besides the company's several other makes.

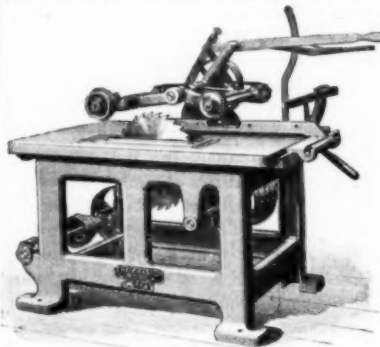
### New Self-Feed Rip Saw.

Attention is invited to the accompanying illustration of an improved rip saw, in which the maker claims is embodied the merits necessary to warrant good work, and a large amount of it. It is one of the best tools it builds for doing rapid work in all woodworking factories, and has met with favor wherever used.

Some of its points are worth the careful consideration of all those who have any ripping to do.

The frame is heavy, to insure solidity and prevent vibration, and all the adjustments are easily and accurately made.

The feed is steady, uniform and very powerful, the rolls being powerfully driven. The lever adjustment is something new, automatically locking and un-



NEW SELF-FEED RIP SAW.

locking upon being grasped or released, and enabling the operator to instantly raise or lower the rolls to suit the different thickness of work, or to raise them out of the way, this thus stopping the feed, and changing the machine into a hand-feed rip saw.

The guide is easily and rapidly adjusted, and is very accurate. It is easily locked and unlocked, while the index is never obscured by dust, and can be swung out of the way if desired.

Several saws at a time can be used if desired for ripping blind slats, trunk strips, etc. A resawing attachment can also be furnished for resawing straight or bevel up to six and one-half inches wide. This is a very valuable acquisition to those who do not have sufficient work to use a separate machine.

The J. A. Fay & Egan Co., Nos. 270 to 290 West Front street, Cincinnati, Ohio, builds the machine.

Col. A. R. Blakely of New Orleans, upon his return from Grand Rapids, Mich., where he had been attending to details in connection with the furnishing of the new St. Charles annex, says that the great furniture manufactures of the Northwest are beginning to realize that the time is coming when they must move South, and many have already established branch houses there.

To facilitate the carrying out of its contract for a big delivery of coal to the Mexican Central Railroad, the Louisville & Nashville road, it is announced, will add to its lien operating between Pensacola and Tampico a 2000-ton steamer, now under construction in a British shipyard.

Official figures of the rice crop of 1902-1903 give 2,005,658 sacks to Louisiana and 893,747 sacks to Texas, a total of 2,899,405 sacks.



## PHOSPHATES.

## Phosphate Markets.

Office Manufacturers' Record,  
Baltimore, Md., August 12.

The phosphate market continues quiet, in sympathy with the movement in other fertilizer ingredients. Receipts of rock are liberal and manufacturers are generally well supplied. Among the phosphate charters reported last week were the following: British steamer *Antique*, 1857 tons, from a South Atlantic port to United Kingdom or continent, on private terms, August; British steamer *Ely*, 541 tons, from Fernandina to United Kingdom or continent, on private terms; British steamer *Magda*, 1500 tons, from a South Atlantic port to United Kingdom or continent, on private terms, and a steamer, 1185 tons, from Tampa to Baltimore, on private terms. Advances from the various sections of the Southern phosphate belt continue to show favorable features, while shipments from the ports are fairly active and from several are of considerable volume. We note shipments last month from Port Tampa of 33,820 tons of phosphate, of which 31,020 tons were pebble and 2800 tons hard rock. Previous shipments from Port Tampa aggregate 181,171 tons, making a total for the seven months ended July 31, 1903, of 214,991 tons. Savannah for the same period shows shipments of 82,423 tons, and Fernandina 63,185 tons. The market for Florida rock continues to show considerable firmness, especially in pebble. Sales, of course, are light, as the various companies are pressed for rock with which to fill old contracts. In Tennessee there is considerable activity throughout the various phosphate sections, and at Mount Pleasant shipments, both domestic and foreign, continue to be made. Miners are still scarce, and operators are taking all the men they can get and are now having a better output than for some time past. Both domestic and export rock are fairly held at outside figures. In South Carolina the development of the mines is progressing with good results, and the market for phosphate rock continues steady. Shipments of domestic rock were larger than usual last month.

## Fertilizer Ingredients.

The market for ammoniates continues quiet, with a moderate volume of business. The list of values, however, is very steady, and the demand from Eastern centers regular. There is also some Southern inquiry.

The following table represents the prices current at this date:

Sulph. of ammonia (gns), spot.	\$3 10	@	3 12½
Nitrate of soda, spot Balto.	2 12½	@	2 15
Blood.	2 72½	@	2 75
Azotline (beef).	2 57½	@	2 60
Azotline (pork).	2 57½	@	2 60
Tankage (concentrated).	2 45	@	2 47½
Tankage (9 and 20).	2 57½	@	106½ 2 60 & 10
Tankage (7 and 30).	22 60	@	22 50
Fish (dry).	32 50	@	35 00

## Phosphate and Fertilizer Notes.

The schooner *John R. Bergen* cleared last week from Charleston, S. C., with 945 tons of phosphate rock for Baltimore.

The steamer *Pinar de Larrinago* cleared last week from Savannah, Ga., for Rotterdam and Hamburg with 3024 tons of high-grade Florida rock for the latter port, valued at \$30,240.

The Little Bros.' fertilizer plant in South Jacksonville, Fla., was sold last week at auction to A. Cosmo Little for \$30,000. It is not known whether the purchaser will put the plant in operation again.

The steamship *Dora*, carrying 2200 tons of phosphate, sailed from Port Inglis, Fla., on the 28th ult. bound for Norfolk, Va., to take coal there for Europe. The steamship *Ornesley* sailed later for Europe with 3700 tons.

The shipments of phosphate rock from the port of Fernandina for the month of July amounted to 8860 tons, amount previously reported 54,325 tons, making a grand total of 63,185 tons for the seven months ending July 31, 1903.

The shipments of high-grade Florida phosphate rock from the port of Savannah, Ga., as reported by J. M. Lang & Co. for the month of July amounted to 3350 tons; shipments previously reported 79,073 tons, making a total for the seven months ending July 31 of 82,423 tons.

Mr. R. M. Thomas, representing the B. S. Royster Guano Co. of Columbia, S. C., closed a contract at Wilmington, N. C., last week for the entire stock of fish scrap now at the Cape Fear and Atlantic fisheries at old Brunswick, below Wilmington, on the river. The purchase consisted of 20,000 tons. The material is now being brought to Wilmington by lighters, and will be shipped to Columbia by rail.

The shipments of phosphate rock from Port Tampa, Fla., from August 1 to 6, inclusive, were as follows: American schooner *William H. Clifford* for Philadelphia with 2400 tons, by the Electrical Phosphate Co.; the American steamship *Dorothy* for Cartaret, N. J., with 3300 tons, by the Palmetto Phosphate Co.; steamship *Robinia* for Kings Lynn, England, with 2600 tons, by Joseph Hull, and the British steamer *Iona* for Dublin, Ireland, with 2750 tons, by the same shipper, making a total of 11,050 tons.

The E. O. Painter Fertilizer Co. has decided to erect a phosphate plant in Jacksonville, Fla., at once, which will cost in the neighborhood of \$100,000. The plant contains all the appliances and apartments necessary in reducing phosphate rock to powder and treating it with sulphuric acid so as to render its stores of phosphoric acid available for plant nutrition. The plant will have about a 20-ton capacity; that is, about twenty tons of sulphuric acid will be employed in the reduction, which means an output of something over forty tons of superphosphate per day.

The report on the production of phosphate rock in 1902, by Dr. Joseph Struthers, is now in press for publication as part of the United States Geological Survey's volume on mineral resources for 1902. The following summary is given: "The phosphate-rock industry in Florida and South Carolina is gradually recovering from the setback it received in 1900. In Florida the decrease, as compared with 1901, in the production of hard rock and river pebble was more than compensated by the large increase in the quantity of land pebble produced, though there was a decrease in the total value of the product. In South Carolina there was a slight decrease in both quantity and value, and in Tennessee there was a slight decrease in production and a slight increase in value of product. It should be borne in mind that the marketed output rather than the rock actually mined is made the basis of the report on production of phosphate rock. The figures for 1902 and 1901, respectively, are as follows: Florida, 785,430 long tons, valued at \$2,564,197, as against 751,906 long tons, valued at \$3,159,473; South Carolina, 313,365 long tons, valued at \$919,725, as against 321,181 long tons, valued at \$961,840; Tennessee, 390,700 long tons, valued at \$1,206,647, as against 409,653 long tons, valued at \$1,192,090."

Commissioner J. G. Lee of the Louisiana board of agriculture and immigration has sent to the various parish officials in the State a circular letter urging them to furnish descriptive matter to real estate, immigration and colonization

agents in the West and Northwest. He shows that in ten years the population of Arcadia parish increased 80 per cent. and that in the same period taxable values increased 182 per cent.

The Houston (Texas) Business League has issued an attractive folder treating of Houston as a distributing point in the Trans-Mississippi section. It tells of the importance of expenditures by the general government in its vicinity, of the many railroads centering there, of cotton, oil, lumber, rice and tobacco handled there, of its financial institutions and of the social opportunities.

## TRADE NOTES.

Brick and Tile Plant.—An established brick and tile plant, now transacting a profitable business, is offered for sale by D. W. Townsend of Cherokee, Iowa. Full particulars furnished on application to Mr. Townsend.

Underwear Mill for Sale.—An established mill for manufacturing ladies' underwear, located in the South, can be purchased. The owner's ill-health forces him to dispose of the property. For further particulars address 401 Empire Building, Atlanta, Ga.

Seeks a Manufacturing Opportunity.—A legitimate manufacturing opportunity is sought by an experienced business man, who will either invest in an established business or purchase outright. Information can be obtained by addressing P. O. Box 18, Richmond, Va.

Bargains in Electric Fans.—Present or prospective buyers of electric fans are advised to address the Ewing-Merkle Electric Co. of St. Louis, Mo., for bargain list. This company finds its house overstocked with Diehl direct-current desk and ceiling fans, and is willing to dispose of the stock at less than factory cost.

Duplicate Their Order.—It is interesting to note that the Hartford (Conn.) Electric Light Co. over two years ago installed a Foster superheater in connection with a 600-horsepower tubular boiler and a Westinghouse-Parsons turbine, and has, as the result of its experience, recently placed an order with the Power Specialty Co. of New York for a duplicate plant.

The Schwarz System.—Great progress is being made in the introduction of the Schwarz system for manufacturing sand-lime bricks. New companies are continually being organized to adopt the system in the South, as well as in other sections of the country. At Charleston, S. C., the National Sand-Lime Brick Co. has just been incorporated to establish a plant.

Opportunity in Manufacturing.—An excellent opportunity for investment in an established and highly profitable manufacturing business is offered. The plant is equipped with modern machinery and produces a staple commodity. It has all the necessary advantages of shipping facilities, etc. The property is located in Eastern New York. For full particulars address Box "K," care Manufacturers' Record.

Rand Drill Exhibit.—The Rand exhibit at the conventions of the Railroad M. M. and M. C. B. Associations and A. S. M. E. at Saratoga Springs in June was an interesting one. A photograph of the exhibit shows that there were on view steam-actuated compressor, Imperial hammers, piston air drills, wood-boring machine, motor-driven compressor and gasoline-engine-driven compressor. The Rand Drill Co. of New York and other leading cities of the country manufactures the tools referred to.

Bowen & Street Changes.—Attention is called to the fact that the Bowen & Street Equipment Co. of Norfolk, Va., has removed its offices from 600 and 601 to 301, 303, 305 and 307 in the New Atlantic Building. This action is taken because of the increasing demands on the company's facilities. The Bowen & Street Equipment Co. has extensive shops and yards, offering to the buying public such equipments as electrical machinery, railway materials and equipment, contractors' plants, lumbering machinery, etc.

Iron Mines Offered.—Valuable iron properties in Minnesota are now on the market, and offer opportunities for development on a profitable basis. Geo. H. Crosby, 105 Providence Building, Duluth, Minn., has for sale iron mines on the Mesaba Range, iron prospects on the Mesaba and Vermillion ranges, and other lands and privileges. Mr.

Crosby has in the past sold some important holdings to the Cleveland Cliffs Iron Co., the Deering Harvester Co. and other leading operators. Write for details regarding his offerings.

Entertains Fifty Typewriter Managers.—Hon. Timothy L. Woodruff, ex-lieutenant-governor of New York, who has so often taken his political enemies "into camp," in a figurative sense, is just now engaged in doing the same thing to his friends in a literal and most delightful fashion. He has invited half a hundred branch-office managers of the Smith Premier Typewriter Co., of which he is president, from all over the United States to spend a week at his famous and beautiful "Kamp Kill Kare" in the Adirondacks. Since assuming the presidency of the company in February Mr. Woodruff has set a pace which increased the sales of the Smith Premier typewriter 50 per cent. in six months, and has built an enormous six-story factory in Syracuse, N. Y., to take care of the increased orders. The party will gather at Syracuse August 6 and 7 for a day's inspection of the new plant and then go to "Kamp Kill Kare."

New Quartering Level.—A combination adjustable quartering level for the facilitation of railway repair work in the shops and on the road has been devised by one of the machinists in the Chesapeake & Ohio Railway shops at Richmond, Va. The new instrument has been shown to a number of master mechanics and other officials and workmen competent of judging its merits. They have invariably expressed their satisfaction with its practical value. W. A. Nunnally, the inventor, is now exhibiting the level to the head officers of the shops on the Chesapeake & Ohio and other railways. He has not yet decided what steps will be taken to market the device. A stock company may be organized to manufacture it, or patent rights may be sold to toolmakers in different parts of the country. The new level has been patented in the United States, Canada, Great Britain and other leading countries. Mr. Nunnally can be addressed at 705½ 21st street, Richmond, by those desiring further information.

Ball Engine Sales.—During July the Ball Engine Co. of Erie, Pa., made many important shipments of its engines for electric service. Altogether there were thirty-six engines shipped, ranging in horse-power from 40 to 400. The greater number of these were direct-connected engines; one of 200 horse-power was a vertical double direct-connected engine, and two were 300 horse-power vertical cross compound direct-connected engines. Well-known manufacturers in all parts of the United States were among the buyers, including Longmont (Col.) Sugar Co., Lookout Mountain Iron Co., Battelle, Ala.; Tawas Sugar Co., East Tawas, Mich.; Owosso (Mich.) Sugar Co., Imperial Tobacco Co., Rocky Mount and Wilson, N. C.; Federal Chemical Co., Nashville, Tenn.; First National Bank, Chicago; Manhattan Railway, New York; Windsor (Col.) Sugar Co., Fort Collins (Col.) Sugar Co., and others. The high character of the purchasers mentioned is in itself a strong recommendation as to the great merit of the Ball engine.

Recent Starr Sales.—Among the best-known builders and furnishers of flour and corn mills and other plants of a similar character is Messrs. B. F. Starr & Co. of North and Centre streets, Baltimore, Md. The firm's recent list of sales is interesting. The following contracts are shown: Mill of W. D. Bahn at New Freedom, Pa., remodeled, increasing capacity and adding new machinery; Whitehall (Md.) Grain Milling & Supply Co., complete plansifter mill, 100 barrels capacity; entire new outfit roller mill, including sifter, to G. T. Baskerville, Champ, Va.; H. F. Pyle at Rising Sun, Md., improvements in roller mill; C. H. Long, Pocomoke City, Md., again remodeling his mill, making improvements; one large outfit, including three grinding mills, cleaner, bolter and corn sheller, to M. E. Heaton, Shooting Creek, N. C.; one large mill outfit to Robert Edward Lee, Laurinburg, N. C.; one 43-inch mill to the Hyman Supply Co., New Berne, N. C., and one mill same size to Jonathan Havens, Jr., Washington, N. C.; also stones and fittings complete to Griffith & Powell Company, Norfolk, Va.; E. C. Godwin, Solerain, N. C., and a similar outfit to Geo. C. Chambers, Augusta, Ga. The roll-dressing work has kept shops running night and day during July, and the orders coming in the way of supplies have been very gratifying this season. Starr & Co. make a specialty of distillery work, and are now remodeling the plants of the Sherwood Distilling Co. and of the Baltimore Distilling Co., Baltimore, installing the largest-size roller mills to prepare the plants for the fall work.

# CONSTRUCTION DEPARTMENT.

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

### ADDRESS FULLY.

It often occurs that a communication merely addressed in the corporate name of a newly-organized company or enterprise cannot be delivered by the postmaster, as the institution has not yet become a matter of public record or knowledge, so that in addressing all new companies reported in these columns it is desirable to add the name of one or more incorporators or interested parties located in the city or town where the new company is established, or address the interested parties at their individual address, as may be shown in the published item. This will help to insure prompt and quick delivery of your communication, though it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## ALABAMA.

Athens—Sewerage.—Alber & Byrne, Birmingham, Ala., have been engaged as consulting engineers to make plans and specifications for sewerage system at Athens; town will vote August 31 on issue of bonds for construction of same.

Birmingham—Cold-storage Plant.—A. A. Gambill and associates are said to have purchased site at \$35,000 and to erect cold-storage plant.

Birmingham—Land Company.—Pioneer Land Co. has been incorporated, with capital of \$24,000, by F. B. Kelsor, James E. Strong, Gus Lee and others.

Ensley—Mining and Development Company.—C. E. Sharpe, P. L. Day, J. A. Bell and J. S. Macon have incorporated Ensley Mining & Development Co., with capital of \$50,000.

Gurley—Saw-mill.—J. G. Grayson is erecting saw-mill.

Hammac—Lumber Mills.—Southern Alabama Lumber Co. has been organized at Mobile, Ala., with capital of \$20,000, and Herman A. Wefel, president-treasurer; Walter S. Reitzell, vice-president, and H. H. Maschmeyer, secretary, and will erect saw-mill, dry kiln and planer for development of timber lands near Hammac. Z. Archibald is architect. Address H. A. Wefel, Mobile.

Mobile—Laundry.—American Laundry Co. has been organized with J. W. Phillips, president; A. L. Willoughby, vice-president; G. H. Bancroft, secretary-treasurer, for establishing laundry. All arrangements have been completed and machinery ordered.

New Decatur—Sewerage.—Bill will be introduced in legislature authorizing issue of bonds for construction of sewerage system. Address The Mayor.

Opelika—Laundry.—R. W. Weaver of Gainesville, Fla., has leased and will put in operation the Opelika Laundry.

Tuscaloosa—Iron Furnace.—Central Iron &

Coal Co. has blown in its Holton furnace; capacity 200 tons of pig iron per day.

## ARKANSAS.

Althelmer—Cotton Gin.—Company recently reported as being organized by J. P. Walt and others for erection of cotton gin has been incorporated as the Merchants' Gin & Milling Co., with capital of \$15,000. Among other incorporators are W. C. Crittenden, D. E. Mahle, T. M. Phillips and others.

Fayetteville—Water-works.—Fayetteville Water Co. will make extensive improvements and extension to its water-works system at cost of \$20,000. Paul H. Enshy is designing engineer.

Little Rock—Harness Factory.—Neff Harness Co. has increased capital from \$10,000 to \$25,000.

Little Rock—Improvement Company.—Cane Hill Improvement Co. has been incorporated, with capital of \$4000, and B. Brewster, president; A. R. Carroll, vice-president; J. S. Edmiston, secretary, and W. S. Moore, treasurer.

Tuckerman—Mercantile.—Chartered: Graham Bros. Company, with capital of \$35,000, by Thomas J. Graham (president) and others.

Yellville—Zinc Mines.—Zinc Belt Mineral Co. has been incorporated, with capital of \$300,000, for conducting general mining business, by A. L. Tuttle, D. J. Hayden, James W. Buckingham and others.

## FLORIDA.

Apopka—Lumber and Veneer Mills.—Consumers' Lumber & Veneer Co. has been incorporated, with capital of \$100,000, and will absorb the plants of Starbird Lumber & Veneer Co. of Apopka, A. C. Starbird of Forest City and a plant near Arcadia, which will be improved and operated in connection with the Apopka plant, which will also be enlarged. Company has also acquired several thousand acres of timber lands in vicinity of Apopka.

Palmetto—Woodworking Factory.—R. J. Burnette, dealer in builders' supplies of all kinds, will install machinery for manufacture of doors, blinds, frames, etc.\*

Seabreeze—Printing Plant.—Pierre deA. Pratt of Leesburg, Fla., and J. N. Willis of Williston, Fla., have purchased and will operate printing plant of the Wilms Publishing Co. at Seabreeze.

Tallahassee—Tobacco Factory.—William B. Schrader in endeavoring to organize \$50,000 stock company for erection of tobacco factory.

Tallahassee—Tobacco Cultivation.—A. H. Ginsburg, Julius Ball, A. Thun and associates have purchased the plantation of John G. Collins, consisting of 800,000 acres of land, which they will cultivate in tobacco and expend about \$30,000 in erection of tobacco barns, sheds and other necessary buildings.

West Palm Beach—Water-works.—West Palm Beach Water-Works Co. will make improvements to its system of water-works.

## GEORGIA.

Ashburn—Ginney.—Farmers' Ginney & Manufacturing Co. has completed its organization by electing J. S. Shingler, president; W. A. Murry, vice-president; T. T. Williams, secretary-treasurer, and W. A. Shingler, general manager; capital \$10,000.

Athens—Cotton Mill.—Bailey-Arnold Manufacturing Co., reported organized last month, will invest about \$50,000 establishing a plant for the manufacture of cord, twine, rope and webbing.\*

Atlanta—Iron and Wool Company.—Chartered: Atlanta Iron & Wool Co., with capital of \$50,000 and privilege of increasing to \$100,000.

Atlanta—Dairy.—W. D. Hoyt, T. E. Veal and J. C. Bond have incorporated the Hoyt-Veal Dairy Co., with capital of \$10,000, and privilege of increasing to \$100,000, for establishment of dairy.

Atlanta—Shops.—Technological course will be established at Boys' High School and mechanical shops fitted up and equipment purchased at expense of about \$2500. D. W. Winburn is the architect. No contracts have been awarded. W. F. Slaton, superintendent schools.

Augusta—Publishing.—Augusta Chronicle Publishing Co., with capital of \$135,000, by H. H. Cabaniss and T. W. Loyless.

Bremen—Warehouse Company.—Chartered: Merchants' & Planters' Warehouse Co., with capital of \$2000, for conducting general warehouse business.

Carrollton—Cotton Mill.—Mandeville Cotton Mills will install additional machinery in its weaving department.

Columbus—Paper Company.—Columbus Paper Co., previously reported incorporated, has completed organization with R. S. Crenshaw, president; W. D. Britt, vice-president, and J. D. Britt, secretary-treasurer.

Columbus—Real Estate.—E. J. Rankin, John A. Rankin and associates of Columbus and W. H. Rankin of Florida have incorporated the Rankin Realty Co., with capital of \$150,000.

Columbus—Store-fixture Company.—Southern Store Fixture Co. has been incorporated, with authorized capital of \$50,000, by Lawson P. Weathers, J. O. McBride and J. G. Wright.

Cuthbert—Ice Factory.—A. Jones has awarded contract for erection of ice factory and cold-storage plant.

Hawkinsville—Cotton.—It is reported that Hawkinsville Cotton Mills will add 1500 spindles and forty looms.

High Falls—Water-power Development.—Towaliga Falls Power Co., previously reported incorporated with capital of \$100,000 for development of water-power to obtain from 3000 to 4000 horse-power, has selected W. C. Whitner of Richmond, Va., consulting engineer. Contract calls for dam, race and power-house, and W. G. Adams, consulting engineer, associated with Mr. Whitner, will superintend the work.

Macon—Cotton Company.—Thomas R. Ayer, Edwin S. Davis, George H. Lowe and others have incorporated the W. A. Davis Co., with capital of \$30,000, and privilege of increasing to \$150,000, for dealing in cotton, conducting general warehouse business, etc.

Moultrie—Live-stock Company.—Chartered: Moultrie Live-Stock Co., with capital of \$15,000, for dealing in live-stock, buggies, wagons, agricultural implements, etc.; J. A. Carlton, general manager.

Montezuma—Planing Mill and Dry-kiln.—Flint Lumber Co. of Macon, Ga., is investigating with view to erecting \$5000 planing mill and dry-kiln at Montezuma.

Newnan—Mercantile.—Chartered: Black Brothers Co., with capital of \$15,000, by G. R. Black and others.

Pembroke—Lumber Mill.—John F. Bixby has purchased lumber mill, timber lands, etc., of the Greas Manufacturing Co., and will organize the Bixby Lumber Co. to operate same.

Savannah—Rice Mill.—Savannah Rice Mill Co. will reorganize, increase capital to \$100,000 and operate under new management.

Sigsby—Saw-mill.—G. F. Taylor is rebuilding saw-mill lately reported burned. Contracts for machinery have been awarded.

Tennille—Cotton Mill.—It is proposed to build a cotton mill, and C. J. Burton is promoting the enterprise.

Thomasville—Variety Works and Planing Mill.—Thomasville Variety Works and Planing Mill, reported recently as burned, will be rebuilt by the proprietors, Beverly & Williams.

Valdosta—Ice Factory and Electric-power Plant.—J. F. Lewis, E. M. Siebel, J. C. Wilson and others have incorporated the Consumers' Ice & Light Co., with capital of \$5000, for manufacture of ice, erection and operation of electric-light and power plant, etc.

## KENTUCKY.

Bentley—Coal Mines.—Fayall Coal Co. has been organized, with capital of \$50,000, for development of coal mines.

Campton—Sewerage.—Surveys have been made and work on construction of proposed sewerage system will soon be commenced. Address "The Mayor."

Corbin—Railroad Yards.—R. Montfort, chief engineer Louisville & Nashville Railroad, Louisville, Ky., has awarded contract to C. D. Smith & Co. of Memphis, Tenn., for construction of new yards at Corbin at cost of \$50,000. Improvements include round-house with capacity for accommodating forty engines and other yard facilities.

Covington.—Mercantile.—Covington Bros. Co. has been incorporated, with capital of \$150,000, and is a reorganization of Covington Bros. Co., wholesale grocers.

Freemont—Lumber Mills.—Whitt Lumber Co. has been organized, with capital of \$40,000, for erection of several saw and stove mills.

Glasgow—Hardware Company.—Chartered:

L. P. Rogers Hardware Co., by L. P. Rogers and others.

Jackson—Power-house.—Jackson Electric Light & Power Co. will erect power-house.

Jane—Coal Mines.—Black Mountain Coal Co. has been organized, with capital of \$70,000, for development of several thousand acres of coal land along base of Black mountain.

Lancaster—Water-works.—Contract has been awarded Bradford, Beeman & Sheffield of New Albany, Ind., for construction of water-works at Lancaster, for which advertisement for bids was recently published in these columns.

Lexington—Power-house.—Lexington Railway Co. will make extensive improvements to power-house, overhauling present equipment and installing new and additional machinery.

Lexington—Tobacco Company.—Continental Tobacco Co. contemplates enlarging its Lexington factory.

Louisville—Stock-yards.—Bourbon Stock-Yards Co. will rebuild at once its yards and sheds lately burned at loss of \$250,000. D. X. Murphy will prepare plans.

Louisville—Transformer Stations.—Louisville Railway Co. will erect two transformer stations near Louisville at cost of \$10,000 each.

Louisville—Machine Shops.—J. T. Harahan, second vice-president Illinois Central Railroad, Chicago, Ill., in telegram to Manufacturers' Record says there is no truth in report mentioned concerning shops at Louisville.

Louisville—Candy and Cracker Factory.—Leese-Wiles Cracker & Candy Co. of Kansas City, Mo., states there is no truth in report that it would build candy and cracker factory in Louisville.

Louisville—Distillery.—Nelson Springs Distillery Co. has been incorporated, with capital of \$20,000, by J. W. Springer, A. J. Schulten and W. T. Hale.

Louisville—Gaspipe Line.—It is reported that the Louisville Gas Co. will expend about \$275,000 in construction of pipe line from the natural gas wells in Meade county to Louisville, and fitting up a system of mains for distribution of natural gas for heating and industrial purposes.

Marion—Coal Mines.—Crittenden Coal & Coke Co., reported recently as incorporated with capital of \$30,000, has leased and will develop 900 acres of coal land; output to be from 600 to 1000 tons per day. For further particulars address H. H. Sayre, general superintendent.\*

Mayfield—Granite Quarry.—Kentucky Granite Co. has been incorporated, with capital of \$10,000, by F. A. McClelland, M. B. Landrum, J. E. Wright and others.

Monticello—Oil Wells.—Kimball Oil Co. has been incorporated, with capital of \$50,000, by R. A. Dempsey, C. C. Kimball and F. A. Kimball.

Owensboro—Lumber Company.—Owensboro Lumber Co. has been incorporated, with capital of \$15,000, by Guy M. Deane, J. W. Cottrell and Edward Deane.

Pineville—Coal Company.—Fern Lake Coal Co. has been incorporated, with capital of \$5000, by A. B. Campbell and W. C. Williams.

Providence—Coal Mines.—Edward Hady of Kansas City, Mo. has purchased controlling interest in Providence Coal Co., and it is said extensive improvements will be made.

Winchester—Carriage Factory.—Beau Bros. contemplate erection of carriage factory.

## LOUISIANA.

Grand Isle—Cannery, etc.—F. B. Merrill of Mobile, Ala., will organize company for purpose of reclaiming swamp lands and for erection of fish cannery at Grand Isle.

Lake Charles—Gas Plant.—Lake Charles Ice, Light & Water-Works Co. has asked for franchise for erection of gas plant.

Lake Charles—Laundry.—H. Moore and associates have purchased the Lakeside Laundry, and will improve by installation of additional machinery.

Lake Charles—Oil Wells, etc.—Edgewood Land & Oil Co. has been organized, with capital of \$50,000, to take over and purchase outright the property of the Louisiana Land & Oil Co., consisting of 10,000 acres of lands. George Lock is president, and George H. Wright, secretary-treasurer.

Marksville—Oil Wells.—Company reported recently as organized with capital of \$75,000



and A. V. Saucier, president; L. C. Tarleton, vice-president, and A. O. Boyer, secretary, will be known as the Marksville Oil & Mineral Co., Limited. Engineer has not as yet been employed nor contracts awarded for machinery.\*

New Orleans—Candy Factory.—Jacobs Candy Co., Limited, has removed its candy factory from Natchez, Miss., to New Orleans and organized with capital of \$50,000 and M. Jacobs, president; company will install refrigerating plant.

Rayne—Oil Wells.—Rayne Planters' Oil & Development Co., reported recently as having increased capital stock from \$150,000 to \$500,000, has acquired for development additional oil properties, investing about \$100,000.

#### MARYLAND.

Baltimore—Enameling Plant.—National Enameling & Stamping Co. will award contract shortly for erection of its three-story brick and iron building 170x115 feet, for which Geo. C. Haskell has prepared plans.

Baltimore—Bulkheads, etc.—The Canton Company is reported as contemplating extensive improvements along the water front near River View in the construction of bulkheads and improvement of real estate by erection of suburban cottages, etc.

Baltimore—Hardware Company.—E. Scott Payne Co. has been incorporated, with capital of \$30,000, for conducting general hardware business, by John H. Dietrich, Hammond Dietrich, J. Clifford Dietrich and others.

Baltimore—Water-power Development.—It is understood that the plans for the development of water-power on the Susquehanna river, previously reported, are being matured. The plan involves a development of about 40,000 or 50,000 horse-power and its transmission to Baltimore by electricity. The Continental Trust Co., Baltimore, is interested in the matter, and can give information when the details are finally completed.

Brunswick—Telephone Exchange.—E. J. D. Gibbs and J. T. Knobe, representing Chesapeake & Potomac Telephone Co. of Baltimore, Md., are investigating with a view to establishing exchange in Brunswick.

Elkton—Underwear Factory.—It is reported that William Little of Philadelphia, Pa., manufacturer of ladies' undergarments, will remove his plant to Elkton.

Hagerstown—Automobile Factory.—Pope Manufacturing Co., Hartford, Conn., owner of the Crawford Bicycle Works of Hagerstown, contemplates adding the manufacture of automobiles to the Hagerstown plant.

Havre de Grace—Packing Plant.—Frederica Packing Co. has been incorporated, with capital of \$10,000, for packing fruits and vegetables, by Philip H. Close, Frank H. Jacobs, Millard F. Wright and others.

Sparrow's Point—Gaspipe Line.—It is reported that contract has been closed between the Maryland Steel Co. of Sparrow's Point and the Consolidated Gas Co. of Baltimore, by which the latter company agrees to take the gas made in the by-product coke ovens lately built. If correct, this will necessitate construction of large pipe line about twelve miles, connecting Sparrow's Point and Baltimore.

Washington, D. C.—Mercantile.—Chartered: A. Löffler Sausage & Provision Co., by Andrew Löffler and others.

Washington, D. C.—Door Stop and Lock Company.—Chartered: Automatic Door Stop & Lock Co., by William V. Blehn, John J. Nelligan, Wm. C. Dashiell and others.

Washington, D. C.—Freight Terminals.—Brady & Son of Baltimore, Md., have been awarded contract for the new Baltimore & Ohio freight terminals in Washington. Contract includes two freight buildings, inbound, 600 feet; outbound, 300 feet; office building, transfer platforms, etc. Buildings will be of brick and cost \$100,000.

#### MISSISSIPPI.

Aberdeen—Button Factory.—John R. Young and W. W. McDougal will organize stock company for erection of pearl button factory.

Belzona—Ice and Power Company.—Consumers' Ice & Power Co. has been incorporated, with capital of \$10,000, by Steve Castelman, J. H. Levy, Will Broomfield and others.

Bogue Chitto—Bridge.—Contract has been awarded E. P. Alsbury & Son of Houston, Texas, at \$2585 for construction of steel bridge across Bogue Chitto river.

Brookhaven—Sewerage System.—City will vote August 25 on issue of the \$30,000 of bonds for sewerage purposes, recently reported. Address "The Mayor."

Brookhaven—Heating Apparatus.—Whit-

worth College will expend \$1000 in improvements, including installation of new heating plant.

Columbus—Spoke Factory.—J. F. Hart, representing the Weiss & Lesh Co. of Muncie, Ind., is investigating with view to locating spoke factory in Columbus.

Ellisville—Water-works.—City will vote September 1 on issue of \$20,000 of bonds for water-works recently reported. Address "The Mayor."

Forest—Water-works.—Town will issue \$4000 of bonds for water-works, as lately reported. Engineer, architect nor builder have as yet been selected; Oliver McIlhenny, Jr., mayor.

Gulfport—Land Improvement.—Mexican Gulf Land Co., reported recently as incorporated with capital of \$110,000 for purchase and improvement of the Henderson Point property, has completed organization, electing Elliott Henderson, president; A. L. Thornton, vice-president-general manager, and Leland J. Henderson, secretary-treasurer.

Jackson—Cooperage.—Paducah Cooperage Co., Paducah, Ky., will erect cooperage at Jackson.

Leflore County—Timber Lands, Saw-mills, etc.—J. J. Ruecker of Murfreesboro, Tenn., and W. J. Ruecker of Lawrenceburg, Ind., operating as Ruecker Bros., have purchased 5500 acres of timber lands in Leflore county, and will erect a number of saw-mills for manufacture of lumber.

Mattison—Wheel Factory.—Standard Wheel Co. of Terre Haute, Ind., has, it is said, purchased the timber on 10,000 acres of land in Conhoma county, Mississippi, and will establish factory at Mattison for manufacture of wheels of all kinds.

Meridian—Shoe Factory.—Quarles Shoe Co. has been incorporated, as recently reported, with capital of \$10,000, for manufacture of shoes; B. F. Quarles, Sr., manager.

Terry—Mercantile.—Chartered: Dennis Brothers Co., with capital of \$10,000.

Tupelo—Cotton-oil Mill.—Tupelo Cotton Oil Co. has amended charter, changing name to the Tupelo Oil & Ice Co.

Walnut Grove—Telephone System.—Mutual Telephone Co. has been incorporated, with capital of \$100,000, for construction of telephone system.

West Point—Sewerage.—City has not contracted for surveys of its proposed \$25,000 sewerage system; B. Y. Rhodes, mayor.

Yazoo City—Ice Plant.—Yazoo City Transportation Co., W. D. Pugh, president, will expend \$18,000 in installation of 30-ton ice plant.

#### MISSOURI.

Farmington—Sanitarium.—Chartered: Farmington Sanitarium, with capital of \$16,000, by W. H. Mayfield and others.

Fulton—Sewerage.—City will construct sewerage system at cost of about \$23,000. Address "The Mayor."

Hermann—Shoe Factory.—Hermann Shoe Manufacturing Co., with capital of \$6000, has been incorporated by George Starck, George Kraetley, August Wahl and others.

Kansas City—Investment Company.—Chandler Investment Co. has been incorporated, with capital of \$10,000, by James Henry Chandler and others.

Kansas City—Water-works, etc.—City will hold election September 16 to vote on issue of \$1,000,000 of bonds for water-works, \$500,000 for parks, \$250,000 for city market, \$225,000 for city hospital and \$100,000 for other improvements. Address The Mayor.

Potosi—Lead Mines.—Pittsburg-Potosi Lead Co. has been incorporated under Delaware laws, with capital of \$250,000, for development of lead and other mineral resources. W. J. Eldridge, Potosi, Mo.; W. L. Missimer, Wilmington, Del., are the incorporators.

St. Joseph—Box Factory.—August H. Wiedman, Otto Moser and W. A. Krefft of St. Louis, Mo., have purchased, will enlarge and operate the Queen City Cigar-Box Factory at St. Joseph.

St. Louis—Hotel Company.—Chartered: Coburn Hotel Co., with capital of \$10,000, by Charles Coburn and others.

St. Louis—Chartered: Grafton Farm & Poultry Co., with capital of \$30,000, by A. T. Menken and others.

St. Louis—Contracting.—Chartered: Jacob Schenk Building & Contracting Co., with capital of \$3000, by Jacob Schenk, Jr., and others.

St. Louis—Belting Company.—Missouri Belting Co. has increased capital from \$25,000 to \$100,000.

St. Louis—Settling Basins.—City council has passed bill appropriating \$575,000 for two new settling basins at the Chain of Rocks.

St. Louis—Krey Dressed Beef Co. has been incorporated, with capital of \$50,000, by P. A. Garneau, Frederick Krey, Philip Hayes and others.

St. Louis—Construction.—Hinchman-Renton Construction Co. has been incorporated, with capital of \$20,000, by R. L. Hinchman, R. G. Mincke, A. H. Engel and others.

St. Louis—Equipment Company.—Inland Equipment Co. has been incorporated, with capital of \$2000, by H. W. Allen, Chas. C. Allen, G. H. Williams and others.

St. Louis—Malt-extracting Company.—American Malt Extracting Co. has been incorporated, with capital of \$150,000, by H. J. Panzer, J. E. Boren, G. M. Viernow and others.

St. Louis—Realty and Building Company.—Phil Hahn & Sons Realty & Building Co., with capital of \$50,000, by Frank, William and Joseph Hahn.

Venice—Sewerage.—City will issue \$30,000 of bonds for sewer purposes. Address "The Mayor."

#### NORTH CAROLINA.

Charlotte—Ice Factory.—Standard Ice & Fuel Co. has increased capital from \$50,000 to \$100,000, and will increase capacity of its ice plant.

Charlotte—Cotton Mill.—Catawba Power Co. has a proposition from capitalists for the establishment of a large cotton mill, provided the company arranges to transmit to Charlotte electric power from its plant now building near Fort Mill, S. C. W. G. Wylie of New York is president, and William S. Lee, Jr., of Fort Mill, S. C., chief engineer.

Charlotte—Wagon Factory.—W. R. Matthews has purchased patent for wagon bed invented by Geo. M. Core, and is forming stock company to build factory for manufacture of wagons equipped with this patent bed.

Elise (not a postoffice)—Distillery.—Marie Wood Distilling Co. has been incorporated, with capital of \$5000, to manufacture all products to be obtained by distillation of turpentine. Incorporators are John B. Lening, Bridesburg, Philadelphia, Pa.; Cyrus Borgner, Philadelphia, Pa.; John L. Tull, Gulf, N. C., and others.

Fayetteville—Water-works.—City will probably purchase plant of Fayetteville Water-Works Co. Address "The Mayor."

Forest City—Woodworking Factory.—Hyder Manufacturing Co., previously organized with capital of \$10,000, is erecting factory for manufacture of coffins, spokes, handles and furniture; H. L. Hyder, manager.

Greensboro—Supply Company.—Chartered: Greensboro Supply Co., with authorized capital of \$25,000, by G. V. J. Guthrey of Charlotte, N. C.; W. A. Hewitt and A. B. Kimball of Greensboro.

Greensboro—Heating and Condensing Company.—Chartered: Monarch Heating & Condensing Co., with capital of \$50,000, by William Tate, M. L. Cable and Paul E. Tate.

Hickory—Sewerage and Water-works.—City will hold election in October to vote on issue of \$90,000 of bonds for water-works and sewerage systems. Address F. B. Ingold.

Hillsboro—Cotton Mill.—Eno Cotton Mills will install a complement of looms for its 10,000 spindles.

Indian Trail—Gold Mines.—Indian Trail Mining Co. has installed 10-stamp mill reported lately as having been installed by R. E. Whaley and J. L. Younts. These parties are stockholders in above company.

Marietta—Warehouse Company.—Marietta Tobacco Warehouse Co. has been incorporated, with capital of \$10,000, by T. C. McNeely of Kingsdale, N. C.; C. A. Oliver, Marietta, and others.

Maxton—Lumber Company.—L. T. Cottingham Lumber Co. has been incorporated, with authorized capital of \$50,000, by L. T. Cottingham, J. W. Carter, A. J. McKimmon and John H. Cook.

New Bern—Timber Lands.—Pamlico & Neuse River Timber Co., with capital of \$125,000, has been incorporated by D. W. Greene, D. J. Nysewander, C. H. Mills, Toledo, Ohio, and O. H. Gulon of New Bern.

Oxford—Cotton Mill.—Oxford Cotton Mills will increase capital from \$125,000 to \$175,000 for the purpose of making improvements.

Salisbury—Ice Plant.—Salisbury Ice & Fuel Co., reported lately to enlarge its ice plant, will install additional machinery for increasing capacity to forty tons per day, and has not awarded contracts for machinery. For further particulars address J. Michael Gluly, treasurer and general manager.\*

Troy—Telephone Company.—Troy Telephone Co. has been incorporated, with capital of \$100,000, by J. R. Blair, O. M. Wade, W. A. Cochran and others.

Washington—Tobacco Company.—Fisher Tobacco Co. has been incorporated, with capital of \$50,000, by T. W. Fisher, J. F. Buckman, E. L. Archbell and others.

West Durham—Mercantile.—Chartered: Young Mercantile Co., with capital of \$30,000, by E. F. Young of Dunn, N. C.; W. A. Erwin of West Durham and others.

Winston-Salem—Saw-mill.—Twin City Wood Co. has been incorporated, with capital of \$25,000, for operating saw-mill, by J. P. Fearington, W. H. Turner, J. A. J. Miller, W. G. Crawford and others.

Winston-Salem—Agricultural-Implement Factory.—American Aquaholst Co. has been incorporated for manufacture of agricultural implements, water hoists, pump and well fixtures, etc., by Jacob Tice, R. W. Tice and T. H. Tice.

#### SOUTH CAROLINA.

Abbeville—Sewerage.—City has decided affirmatively issue of \$20,000 of bonds for construction of sewerage system; J. L. McMillan, mayor.

Bishopville—Mercantile.—Heath-Massey-Morrow Company has been incorporated, with capital of \$30,000, and privilege of increasing to \$100,000, by R. A. Morrow, C. S. Massey, A. W. Heath and others.

Charleston—Bottling Works.—Charleston Bottling Co. has been incorporated, with capital of \$30,000, by J. S. Farum of Charleston, Thomas Wilson of Cade's, S. C., and others.

Charleston—Brick Works.—National Sand-Lime Brick Co. has been incorporated for manufacturing sand-lime brick under the Schwarz system. Further particulars can possibly be obtained by addressing Christian J. Larsen of Charleston.

Charleston—Cotton Compress and Wharf Company.—Charleston Cotton Compress & Wharf Co. has been incorporated, with capital of \$30,000, by W. E. Hugen and W. E. Miller.

Cheraw—Planing Mill.—Wm. Godfrey & Co. will erect planing mill with dry-kilns, as recently reported, and have placed orders for all material and machinery; cost \$20,000; capacity eight cars of surfaced dimension lumber and 20,000 feet of flooring per day.

Columbia—Steam-valve Company.—Brooks Automatic Steam Valve Co. has increased capital from \$60,000 to \$100,000.

Easley—Cheese Factory.—Company has been organized with J. H. Miller, president; Mack Farmer, vice-president, and G. H. Hendricks, secretary-treasurer, for erection of cheese factory at Cedar Rock.

Easley—Cheese Factory.—Company has been organized with J. W. Rosemond, president; W. C. Pickens, vice-president, and C. J. Ellison, secretary-treasurer, for establishing cheese factory at Brushy creek.

Gaffney—Contractors.—Victor Spurgeon and Luther Curry have formed partnership, and will conduct general contracting business.

Greenville—Building Materials.—Oregon Lumber Co. has been organized, with capital of \$15,000, for dealing in building materials of all kinds, by T. O. Lawton, T. O. Lawton, Jr., and W. T. Bull.

Greenville—Live-stock Company.—Chartered: Greenville Live-Stock Co., with capital of \$6000.

Greenville—Cannery.—M. P. Matheny and Joe Capell will establish cannery.

Lancaster—Electric-light Plant.—Lancaster Cotton Mills contemplates installing electric-light plant for lighting the town. Negotiations for franchise and contract are now pending.

Manning—Telephone Company.—Chartered: Manning Telephone Co., with capital of \$5000, by F. C. Thomas, D. M. Bradham and W. E. Jenkins.

McCormick—Cotton Mill.—Arrangements have been made to organize the cotton mill company previously reported as proposed. B. F. Mauldin of Anderson, S. C., is the promoter. C. R. Makepeace & Co. of Providence, R. I., will be engineers in charge. No other details decided.

Seneca—Bottling Works.—Hinkle & Anderson are establishing bottling works.

Union—Sewerage System.—Geo. O. Tenny of Spartanburg, S. C., has contract at \$23,532 for construction of sewerage system at Union previously reported.

#### TENNESSEE.

Chattanooga—Box Factory.—Consignee Favorite Box Co. will make extensive improvements, including erection of dryhouse with two rooms, each of which will be 16x65 feet, installation of steam derrick and large drag saw.

Columbia—Stave and Lumber Company.—United States Stave & Lumber Co. has been



incorporated, with capital of \$10,000, by M. E. and F. S. Wheeler, E. Dan Smith, John W. Fry and Percy S. Chandler.

**Columbia—Phosphate Mines.**—It is reported that Robin Jones of Nashville, Tenn., has purchased for development about 1200 acres of phosphate lands near Columbia.

**Copper Hill—Smelting Plant, Briquetting, etc.**—Tennessee Copper Co., Randolph Adams, general manager (recently reported), has completed extension to its steel smelting building and intends to construct an additional blast furnace 56x180 inches, also an additional compound blowing engine for this furnace with capacity for delivering 20,000 cubic feet of free air per minute at smelting pressure. There is also contemplated an early construction of a briquetting plant for handling the smelter fine dust. Contracts for proposed improvements are all let and machinery under order.

**Jackson—Cotton Gins.**—The Watson Cotton Co., reported last week as incorporated with capital of \$15,000, owns cotton gins at several different cities in Tennessee, and has added new machinery to all of its plants. W. J. Johnson of Jackson, Charles M. Watson and Howard Eason of Huntingdon, Tenn., are among the incorporators.

**Knoxville—Workshop.**—Contract will be awarded for erection of two-story brick building at cost of \$3000 at the Deaf and Dumb Asylum, to be equipped with latest appliances for boys' workshop.

**Knoxville—Coffin Factory.**—Southern Coffin Co. of Maryville, Tenn., will remove its factory to Knoxville, and will install additional machinery for increasing capacity.

**Magnolia—Water-works.**—City contemplates constructing system of water-works. Address "The Mayor."

**Memphis—Distillery.**—J. M. Toohy, Sam Baumgarten, G. Mueller, George H. Monsarrat and others have incorporated the Century Distilling Co. with capital of \$1000.

**Memphis—Ginners.**—Farmers' Compress Co. will install cotton gin with capacity of fifty square bales per day.

**Memphis—Cold-storage Plant.**—Hardwig Perez of Jacob Perez & Co. has made proposition for establishment of \$100,000 cold-storage warehouse at Memphis.

**Memphis—Sand Company.**—Union Sand Co. has been incorporated, with capital of \$25,000, by B. N. Richards, Martin Kelly, John Griffin and others.

**Memphis—Paving.**—City will award contracts for construction of granolithic walks, curbing and gutters for public parks, expending about \$3000. Address The Mayor.

**Nashville—Spoke and Handle Factory.**—Nashville Spoke & Handle Manufacturing Co. has been incorporated, with capital of \$10,000, by C. D. Glass, B. W. Marr, C. F. Turner and others.

**Nashville—Factory.**—J. S. Reeves & Co. have awarded contract to Fulcher Building Co. and H. Griffin & Son at \$35,000 for erection of proposed factory building.

**Orme—Coal Mines.**—Campbell Coal & Coke Co. is increasing its output of 500 tons of coal per day and making other improvements, including erection of fifty operatives' dwellings.

**Paris—Tobacco Factory.**—Cumberland Tobacco Works, reported recently under Nashville, Tenn., as incorporated with capital of \$20,000, has purchased plant at Paris, Tenn., of the Porter Hudson Tobacco Co., and will operate it. Address J. P. Regan, acting secretary, Nashville, Tenn.

**Shelbyville—Pants Factory.**—Nashville (Tenn.) parties are investigating with view to establishing pants factory at Shelbyville. Names of those interested will be announced later.

**Waldensin—Coke Ovens.**—Chicago-Tennessee Coal & Coke Co., principal office, Chicago, Ill., will construct another bank of sixty coke ovens as soon as the sixty now in course of erection are completed. Company is mining from 300 to 400 tons of coal per day.

#### TEXAS.

**Bay City—Mercantile.**—Chartered: Markham Mercantile Co., with capital of \$10,000, by S. S. Perry (president) and others.

**Beaumont—Coffin Factory.**—Jackson-Wentherly Sash, Door & Blind Co. has increased capital \$10,000, and will install machinery for manufacture of coffins and caskets.

**Brownsville—Improvement Company.**—Yluria Townsite & Improvement Co. has been incorporated, with capital of \$100,000, by Francisco Yluria, Daniel Yluria, George Moore and others.

**Fort Worth—Paving.**—Parker-Washington Company has contract for street paving in

Fort Worth; cost \$50,000; John B. Hawley, city engineer.

**Galveston—Cattle Company.**—Chartered: Alvin-Brazoria Cattle Co., with capital of \$4000, by George Sealy, V. H. Davidson, J. J. Davis and others.

**Galveston—Live-stock Company.**—The Padre Company, with capital of \$10,000, has been incorporated by Hunt McCaleb, George Sealy and Gus Schultz.

**Gonzales—Stone Quarry.**—Company has been organized with F. T. Fahrenkamp, president; J. W. Green, vice-president, and William Maug, secretary, for development of stone quarry near Gonzales. Capital is \$15,000.

**Hallettsville—Oil Wells.**—Ferd Hillje, H. R. Haverlah and Otto Fahrenthold have purchased 600 acres of land and will sink test wells for oil.

**Hillsboro—Knitting Mill.**—It is reported that Hillsboro Hosiery Mills will double its plant.

**Hillsboro—Elevator.**—Hillsboro Grain & Elevator Co., recently reported, has not as yet secured architect to plan and build proposed corn elevator.\*

**Houston—Rice Cultivation.**—Southern Rice Plantation Co., lately reported as organized with capital of \$300,000 for cultivating in rice 10,000 acres of land in Matagorda and Wharton counties, and to construct irrigating canals, etc., has not as yet awarded any contracts for machinery. Address W. C. Moore, 305½ Main street, Houston, Texas, for particulars.

**Houston—Rice and Irrigation Company.**—Kentucky Rice & Irrigation Co., lately reported incorporated with capital of \$30,000, has purchased the holdings of the Harris County Rice & Irrigation Co., consisting of about 1500 acres of land near Houston. Address 1013 Franklin avenue.

**Houston—Sewerage.**—City will hold an election to vote on issue of \$800,000 of bonds for sewerage, street improvements and schools. Address "The Mayor."

**Jefferson—Water-works.**—City has decided by popular vote to issue \$15,000 of bonds for construction of water-works recently reported, and J. H. Rowell, mayor, is ready for specifications, etc.

**Lone Oak—Gin Company.**—Farmers' Gin Co., reported recently as incorporated with capital of \$20,000, is change of name from the Merchants & Farmers' Gin Co. (established).

**Marble Falls—Cotton Mill.**—Reports state that S. F. Harrill of West, Texas, and others will establish a large cotton mill, South Carolina parties having subscribed \$100,000.

**Marshall—Cotton-oil Mill.**—Marshall Oil Co., reported lately as incorporated with capital of \$25,000, will erect a three-press cottonseed-oil mill. Address A. J. Halle, Jefferson, Texas.

**Pilot Point—Ice and Power Plant.**—Pilot Point Ice & Power Co. has been incorporated, with capital of \$30,000, for manufacture of ice and to generate electricity for lighting and power purposes. G. E. Light, A. H. Gee, F. W. Hayden and A. P. Cosgrove are the incorporators.

**San Marcos—Street Improvements.**—City will vote August 23 on issue of \$3000 of bonds for street improvements. Address The Mayor.

**Seymour—Mercantile.**—Chartered: W. T. Brown & Co., with capital of \$5000, by Thos. G. Easley and others.

**Sour Lake—Oil Wells.**—Chartered: Gold Coin Oil Co., with capital of \$50,000, by C. W. Ransom, J. E. Croable and others.

**Taylor—Water-works.**—L. W. Chase of Cleburne, Texas, and associates of New York and Pennsylvania have purchased and will operate entire plant and franchise of the Taylor Water-Works Co.

**Terrell—Cornmeal Mill.**—C. W. Owens will erect cornmeal mill.

**Texarkana—Casket Factory.**—Texarkana Casket Co. has been incorporated, with capital of \$10,000, for manufacture of caskets, etc., by J. Wesley Jones, W. B. Jones and Leo Kruse.

**Timpson—Planing Mill.**—Ragley Lumber Co. will rebuild planing mill reported burned at loss of \$25,000.

**Waco—Oil Wells.**—Prudential Petroleum Co. has been incorporated, with capital of \$100,000, by W. M. Stephenson, Bart Moore, Sam Trubshaw, Sam Sanger and others.

#### VIRGINIA.

**Cape Charles—Sewerage.**—City will issue \$10,000 of bonds for construction of system of sewerage. Address The Mayor.

**Fredericksburg—Wagon Works.**—Fredericksburg Spoke Works has purchased Lan-

dram Wagon Works, and will consolidate, operating the two plants under one management. Brick addition is being erected, and capacity will be increased.

**Jamestown—Land Improvement.**—Jamestown Island Park & Land Co. has been formed, with capital stock of \$2,000,000, for improving 1600 acres on the island of Jamestown and 6000 acres adjoining. The adjoining property will be improved by laying off of streets, erection of hotels, etc. It is said that O. D. Jackson, president of the Jamestown, Yorktown & Old Point Railway, is interested in the new company.

**Lynchburg—Laundry.**—Antiseptic Laundry Co. has been incorporated, with capital of \$5000, by A. M. Campbell, R. C. Blackford, N. D. Eller and others.

**Manchester—Electric-light Plant.**—Merchants' Co-operative Light & Power Co. has applied for franchise for erection of electric-light and power plant.

**Mosay Creek—Flour Mill.**—Augusta Milling & Mercantile Co. has been organized, with Samuel Forrer, president (and who was reported recently, under Staunton, Va., as contemplating erection of flour mill); G. K. Foster, secretary-treasurer, and J. J. Nichols, general manager, for erection of 75-barrel flour mill to be operated by water-power. Building will be four stories, 60x40 feet. Improvements will be in charge of J. J. Nichols.

**Norfolk—Real Estate.**—Cruser Place Co. has been incorporated, with capital of \$50,000, for dealing in real estate, by C. M. Cruser and others.

**Norfolk—Hotel Company.**—Monticello Hotel Co. has been incorporated, with capital of \$100,000, to purchase lease of Sylvanus Stokes, present proprietor of the Hotel Monticello.

**Norfolk—Greenhouse.**—Hugh L. Aumann Company, reported recently as incorporated with capital of \$50,000, is a consolidation of Hugh L. Aumann and the Park Avenue Greenhouse Co. New company has ordered about 6000 additional feet of greenhouse property, 40-horse-power boiler and steam fittings, ventilators, lumber, etc., necessary to erection of new buildings.

**Petersburg—Cotton Mills.**—Virginia Consolidated Milling Co. will add largely to the equipments of the several cotton mills it acquired recently.

**Petersburg—Tobacco Factory.**—David Dunlop, manufacturer of tobacco, has been incorporated with Martin S. Watts of New York, vice-president, and J. T. Wilcox of New York, secretary, to take over, enlarge and operate tobacco factory of David Dunlop.

**Portsmouth—Mattress Factory.**—Frank Lindsay will erect new mattress factory, as reported last week, for increasing capacity of his present plant.

**Radford—Woodworking Factory.**—Morgan-Pratt Company has been incorporated for manufacture of wooden articles by R. P. Morgan, C. W. Pratt and Selden Langley.

**Richmond—Clothing Company.**—Chartered: Poindexter, Parrish & Kirk Company, with capital of \$10,000.

**Roanoke—Coal Mines.**—Clear Air Anthracite Coal Co. has been incorporated, as lately reported, with minimum capital of \$10,000, maximum capital of \$50,000, for development of coal mines in Montgomery county on Strubbles creek. Chas. B. Johnston of Christiansburg, Va., is president, and directors include Chas. A. Johnston, Frank A. Hill, W. K. Fagg, A. D. Walton and Joseph Stras. Company's office is Roanoke, Va.\*

**Virginia—Coal Company.**—Virginia & Western Coal Co. has been incorporated under Delaware laws, with capital of \$200,000, by Homer D. Jones, Frank A. Alden, Wm. P. Worth, L. G. Smith of Chicago, Ill., and Harry W. Davis of Wilmington, Del.

#### WEST VIRGINIA.

**Benwood—Steel Mill.**—It is rumored that the Wheeling Steel & Iron Co., principal office Wheeling, W. Va., is preparing plans for erection of an additional mill at Benwood.

**Berkeley Springs—Knitting Mill.**—Black Rock Knitting Co. of Hagerstown, Md., contemplates establishing a branch knitting mill at Berkeley Springs.

**Berryville—Bridges.**—Supervisors of Clarke county have awarded contract to Nelson & Buchanan of Chambersburg, Pa., at \$39,000 for construction of two steel bridges to span Shenandoah river.

**Bramwell—Brick, etc., Works.**—New River Sandstone Brick Co. has been incorporated, with capital of \$100,000, for manufacture of brick, tile, terra-cotta, etc., by Henry Bowen of Bramwell, Edwin Mann of Bluefield, W. Va.; Wyndham Stokes of Welch, W. Va., and others.

**Cameron—Street Paving and Sewerage.**—

City has voted to issue \$8000 of bonds for paving and sewerage streets. Address "The Mayor."

**Charleston—Mining.**—Chartered: Transvaal Copper Co., with capital stock of \$5,200,000, for developing mineral lands of all kinds, by J. R. Thomas of Charleston, Oscar C. Roach, Alfred Vageler, John M. Eilers and Rudolph A. Keebler of Cincinnati, Ohio.

**Clarksburg—Real-estate Development.**—Central Development Co. has been incorporated, with capital of \$5000, for developing and improving real estate, by F. C. Devricks and E. B. Hardesty of Clarksburg, Howard Robinson of Dola, W. Va., and others.

**Decota—Mercantile.**—Chartered: Widder Ann Bargain House, with capital of \$10,000, by A. W. Bush and others.

**Fairmont—Electric Plant, Water-works, etc.**—South Side Land Co. has been incorporated, with capital of \$100,000, for dealing in and improving real estate by erection of houses, construction of water-works, sewerage, electric plant, etc. Incorporators are R. O. Kendall, R. T. Cunningham, H. Souderly, J. F. Honsaker and others.

**Franklin—Telephone Exchange.**—Mutual Telephone Co. will install new switchboard.

**Glen Jean—Coal Mines, Coke Ovens, etc.**—Laura Mining Co. has been incorporated, with capital stock of \$500,000, for development of coal mines, manufacture of coke, etc., by James F. Brown, Malcolm Jackson, Geo. S. Couch, Jr., all of Charleston, W. Va., and Thomas Nichol of Glen Jean.

**Glenwood—Power-house, etc.**—Engineering department of Baltimore & Ohio Railroad Co. has awarded contract to Pittsburg Construction Co. of Pittsburg, Pa., at \$20,000 for erection of oilhouse, storehouse and turntable at Glenwood. Bids have also been received for erection of proposed power-house, round-house, water-treating plant and machine shops at the Glenwood yards; total cost to be about \$300,000. Electricity will be the power applied to all the shops, machines to have individual motors.

**Grafton—Electric-light and Gas Plants.**—Grafton Street Railway Co. has purchased, will improve extensively and operate the electric-light and gas plants of the Grafton Gas & Electric Light Co.

**Huntington—Rail Works.**—A. F. Baumgarten & Bro. of Pittsburg, Pa., have purchased the plant of the Huntington Tin & Planished Co. at Huntington, as recently reported, and will remodel, taking out the sheet-iron equipment and replacing it with bar mills for the manufacture of bar iron and steel and light steel rails. Union Rail Co. has been incorporated, with capital of \$50,000, to operate the plant, majority of stock to be held and controlled by A. F. Baumgarten & Bro. General office of the Union Rail Co. will be at Huntington; offices of president and manager will be 902 Farmers' Bank Building, Pittsburg, Pa., where all communications should be addressed.

**Morgantown—Glass Works.**—Economy Tumbler Co., reported recently as incorporated for manufacture of lead glass blown tumblers, will secure the plant known as the Morgantown Glass Works. Address Geo. W. Fry.

**Parkersburg—Gas Plant.**—Hocking Valley Consolidated Gas Co., with capital stock of \$500,000, has been incorporated for erection and operation of gas plant, by V. B. Archer, J. T. Harris and J. A. Witherell of Parkersburg, Daniel A. Cameron of Pittsburg, Pa.; R. D. Crawford of Marietta, Ohio, and others.

**Princeton—Coal Mines.**—Spring Coal Mining Co., with capital of \$150,000, for development of coal mines, manufacture of coke, etc., by A. W. Reynolds of Princeton, C. L. Davenport of Philadelphia, Pa.; W. M. Spring and J. S. Murphy of Boston, Mass.

**Logan County—Coal Mines.**—L. W. May Lumber Co. of Steubenville, Ohio, has purchased and will develop 5000 acres of coal and timber lands in Logan county, West Virginia. Saw-mills with capacity of 40,000 feet per day will be erected.

**Morgantown—Glass Factory.**—Press Prism Plate Glass Co. will install additional machinery for increasing capacity.

**Moundsville—Electric-light Plant.**—Moundsville Electric Co. will, it is reported, make some improvements.

**Northfork—Telephone System.**—R. W. Doss of Welch, W. Va., has contract for constructing telephone system from Northfork to Ashland.

**Parkersburg—Booms, Piers, Dams, etc.**—Hughes Boom & Lumber Co. has been incorporated, with capital of \$25,000, for constructing lumber booms, piers, dams, etc., by Geo. A. Ecker, Edwin L. Davidson, Charles E. Vandever and others.

**Pennsboro—Electric-light and Power Plant.**—Myer Newberger & Co. have applied for fran-



chase for erection and operation of electric street railway, electric-light and power plant. Address The Mayor.

Powells—Coke Ovens.—Powell Coal & Coke Co. will erect 100 new coke ovens at once, and later on will erect another 100 ovens.

Pratt—Coal Mines.—Wacoma Coal Co. has been incorporated, with capital of \$50,000, for developing coal mines, manufacture of coke, etc., by J. A. Wood, E. G. Simms and Harrison Johnson of Pratt, W. G. Hubbard of Charleston, W. Va., and others.

Ronceverte—Realty Company.—Chartered: Ronceverte Realty Co., with capital of \$10,000, by C. I. Zirkle, S. A. Moore, M. Peck, M. C. Talbot and others, all of Philippi, W. Va.

Ronda—Coal Mines.—Peerless Gas Coal Co. has been incorporated, with capital of \$25,000, for development of coal, gas and timber lands, by W. H. Vanden of Ronda, J. B. Field of Charleston, T. W. Field of Middleport, Ohio, and others.

Sistersville—Machine Shop and Foundry.—William M. Robertson of Pittsburg, Pa., is investigating with view to establishing foundry and machine shops at Sistersville for manufacture of well-drilling tools, etc., patented by John R. Long of Akron, Ohio.

Wheeling—Piano Factory.—Hoehl & Gleaser Piano Co. has increased capital from \$30,000 to \$100,000, and will soon begin erection of its proposed factory building.

Wheeling—Stove and Range Company.—Wheeling Stove & Range Co. will erect new buildings and install additional machinery for increasing capacity of its stove and range foundry.

#### INDIAN TERRITORY.

Ada—Water-works.—City voted in favor of issue of \$30,000 of bonds for water-works recently reported. Address The Mayor.

Okmulgee—Water-works.—Burns & McDonnell, 607 Postal Telegraph Building, Kansas City, Mo., will make surveys, plans and specifications for city's proposed water-works system.

#### OKLAHOMA TERRITORY.

Lawton—Mining.—Big Four Mining Co. has been incorporated, with capital stock of \$500,000, by John McDuffie, James Adams, Paris Benbow and others.

Manchester—Water Tower.—City will construct water tower for fire protection. Address "The Mayor."

Oklahoma City—Cotton Mill.—Chartered: Oklahoma Duck & Waterproof Manufacturing Co., with capital stock of \$50,000, by Jos. S. Patrick, W. P. Conger and George W. Patrick of Oklahoma City, and Chas. C. Henderson of St. Louis, Mo.

Oklahoma City—Duck and Waterproof Manufacturing Company.—Oklahoma Duck & Waterproof Manufacturing Co. has been incorporated, with capital of \$50,000, by Joseph and George Patrick of Oklahoma City, Chas. C. Henderson of St. Louis, Mo., and others.

Oklahoma City—Mining.—Southwestern Exploitation Co. has been incorporated, with capital stock of \$1,000,000, by P. Waldron, Jr., and G. M. Thompson of Oklahoma City; G. T. Helena of Mountain Park, O. T.; O. K. Benedict of Hobart, O. T., and others.

Oklahoma City—Copper Mines.—Chartered: Kiowa Copper Co., by G. F. Lindsay, H. O. Shelby, F. S. Carle and others.

Snyder.—Chartered: Snyder Consolidation Co., with capital of \$25,000, by S. D. Baller, B. C. Burnett, C. T. Davidson and others.

#### BURNED.

Ashboro, N. C.—J. R. Smith's saw-mill.

Corning, Ky.—J. H. Hartke & Sons' carriage factory, loss \$40,000; New England Distilling Co.'s plant, loss \$15,000, and the Consumers' Ice Co.'s factory, estimated loss \$30,000.

Little Rock, Ark.—Little Rock Mill & Elevator Co.'s plant; estimated loss \$75,000.

Petersburg, Va.—Saw-mill of R. L. Watson, Jr., in Surry county.

Tuscaloosa, Ala.—Tuscaloosa Light & Power Co.'s plant damaged by boiler explosion to extent of \$25,000.

#### BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Albany, Ga.—School.—F. B. Leonard has contract for erecting the addition to Albany Academy, recently reported.

Ada, I. T.—Schools.—City has decided by popular vote to issue \$15,000 of bonds for schools. Address The Mayor.

Americus, Ga.—Train Shed.—Central of Georgia Railway will award contract for erection of its proposed train shed at Americus; will be 200 feet in length. Address J. H. Hall, superintendent, Macon, Ga.

Annapolis, Md.—Gymnasium.—Contract to build new gymnasium at Naval Academy has been awarded Henry Smith & Sons of Baltimore, Md., at \$225,000.

Austin, Texas—Hospital.—Board of managers of the Confederate Home has awarded contract to Watterson & Flume of Austin for erection of hospital, not to J. Wattinger, as was reported by error.

Baltimore, Md.—Church.—Walter E. Burnham has contract for remodeling building corner of Greene and German streets into warehouse for Strauss Bros.; cost \$10,000.

Baltimore, Md.—Store Building.—Brady & Watters have contract for erecting addition to Jordan & Stabler's store building, recently reported.

Baltimore, Md.—Residence.—W. Plunkett Stewart will erect residence near Rogers Station.

Baltimore, Md.—University Buildings.—Contract for erection of the dental department of the University of Maryland, recently reported, has been awarded T. B. Stanfield & Son.

Beaumont, Texas—City Hall, etc.—Wm. Weber has contract (as lately reported) for erection of the proposed \$30,000 City Hall and fire station and a \$15,000 jail.\*

Birmingham, Ala.—Warehouse.—Chas. W. Thompson, reported recently to erect \$10,000 warehouse to be occupied by Kates Transfer Co., has awarded contract to Allen J. Krebs Company.

Birmingham, Ala.—School Building.—City will hold election to vote on issue of \$500,000 of bonds for erection of new high school. Address Mayor Drennen.

Cartersville, Ga.—Church.—The Baptists will erect \$15,000 church. Address Pastor Baptist Church.

Chattanooga, Tenn.—Library.—Adams & Bearden and R. H. Hunt are the architects in charge of erection of proposed Carnegie Library, as reported recently. Building will be 60x100 feet, and cost \$50,000.\*

Coeburn, Va.—Dwellings.—Cranes Nest Coal & Coke Co. has awarded contract for erection of 100 miners' dwellings.

Dallas, Texas—Church.—South Ervay Street Methodist Church has had plans made for erection of \$15,000 edifice. Address The Pastor.

Dallas, Texas—Business Building.—It is said that Adolphus Busch of St. Louis, Mo., has purchased site at \$35,000 in Dallas, and will erect business building.

Dallas, Texas—Residence.—M. H. Thomas has awarded contract to Thomas Beggs for erection of two-story brick residence to cost \$16,000.

Dallas, Texas—Bank Building.—Trinity Valley Trust Co. has awarded contract for erection of \$25,000 structure at 307 Main street.

Dallas, Texas—Building.—Busch Temple of Music Co. has been organized, with capital of \$200,000, and purchased building 307 Elm street, which it will remodel at cost of \$30,000.

Dothan, Ala.—Courthouse.—George Leslie, probate judge, Dothan, Ala., will receive sealed proposals until August 20 for furnishing labor and materials for erection of new courthouse and jail in accordance with plans and specifications now on file in probate judge's office at Dothan, and prepared by Andrew J. Bryan & Co., New Orleans, La. Each bidder must submit with his proposal for courthouse certified check for \$2500, and also certified check with proposal for jail in the amount of \$1000. Bond required and usual rights reserved. For information pertaining to plans and specifications address the architects, from whom bidders can secure plans and specifications, together with proposal sheets.

Greensboro, N. C.—Hospital.—Sisters of Charity are arranging for erection of their proposed \$100,000 hospital.

Hertford, N. C.—Bank Building.—Hertford Banking Co. will erect new office and bank building. W. P. Rose of Raleigh, N. C., is the architect.

Houston, Texas—College.—Contract has been awarded John Stadler for erection of the proposed \$25,000 college for the Basilican Fathers of Toronto, Canada; building will be three stories, of brick, with slate roof, 54x97 feet.

Houston, Texas—Residence.—Theo. Bellthor will erect \$6500 residence.

Houston, Texas—Y. M. C. A. Building.—Young Men's Christian Association has had plans prepared and will erect \$100,000 structure.

Houston, Texas—Fire Hall.—Plans of Cook & Co. for proposed \$30,000 fire hall have been accepted by city, as reported last week, and Mayor Holt will receive bids until September 1 for erection of building, which will be 100x50 feet.

Houston, Texas—Residence.—Dan Kennedy has awarded contract for erection of \$10,000 residence.

Houston, Texas—Warehouse.—Waco Electrical Supply Co. of Waco, Texas, has awarded contract for erection of warehouse and depot at Houston.

Jacksonville, Fla.—Library.—H. J. Kluthe has completed plans for proposed Carnegie Library, and contracts will be awarded at once.

Kansas City, Mo.—Flats Building.—C. F. Hammers has had plans prepared for row of six flats buildings to be erected at cost of \$15,000.

Kingstree, S. C.—School.—Mallard Lumber Co. of Greelyville, S. C., has contract at \$250 for erection of school building at Kingstree.

Kingwood, W. Va.—Bank Building.—Shantz & Von Derlinden have contract at \$900 for erecting the two-story stone bank building for Kingwood National Bank.

Lexington, Ky.—Office Building.—Hendricks Bros. & Co. have contract, as reported last week, for erection of Security Trust Co.'s building, which will be eight stores, 68x118 feet, and cost \$180,000. McCarty & Bulford of Columbus, Ohio, prepared the plans. All contracts have been awarded.

Lexington, Va.—Administration Building.—Plans of Frye & Chesterman of Lynchburg, Va., have prepared plans for administration building for Virginia Military Institute.

Little Rock, Ark.—Business Building.—Chas. K. Lincoln will erect brick business building.

Louisville, Ky.—Dwellings.—D. X. Murphy & Bro. have prepared plans for three dwellings for Fidelity Trust & Safety Vault Co.

Louisville, Ky.—Store Building.—John Bacon will improve store building, 553 Fourth avenue, at cost of \$12,000. Clark & Loomis are architects.

Middletown, Md.—Opera-house.—Middletown Hall Association proposes the erection of theater building.

Mobile, Ala.—Building.—Pollock & Bernheimer, druggists, will erect five-story brick and stone building in addition to their present store; electric or hydraulic elevator will be installed. Plans and specifications are in hands of Rudolph Benz, architect. No contracts have been awarded.

Mobile, Ala.—School.—McAdory, Watkins & Ward have contract at \$300 for erecting the Leinlauf school building.

Nashville, Tenn.—Building.—National Baptist Publishing Board (colored) will erect new building.

Norfolk, Va.—Hotel.—Gladstone Hotel, W. J. McDowell, proprietor, will be enlarged and improved.

Oklahoma City, O. T.—Hotel.—Dr. John Threadgill has had plans made by Coady & Webster for erection of five-story hotel building 75x100 feet.

Oklahoma City, O. T.—Church.—Pilgrim Congregational Church, Rev. Thomas H. Harper, pastor, will erect \$20,000 edifice.

Oxford, Ga.—College Improvements.—Contract for improving the old Science Hall of Emory College has been awarded H. V. Slocum of Covington.

San Marcos, Texas—Schools.—City will vote August 28 on issue of \$5000 of bonds for school purposes. Address The Mayor.

St. Louis, Mo.—Hotel.—G. A. Hoffman will organize company with capital of \$80,000 for erection of three-story brick hotel to cost \$60,000, for which plans have been prepared by H. Blair Ridginton.

Tampa, Fla.—Building.—Robert Mugge will erect two-story building 104x60 feet, to cost \$14,000.

Thomaston, Ga.—Courthouse Improvements.—M. H. Sandwich, clerk county commissioners, will receive sealed bids until August 20 for improvement of and rendering fireproof the brick vaults in courthouse. Plans and specifications are on file in office of county commissioners. Usual rights reserved.

Waco, Texas—Schools.—School board will erect three new school buildings, as recently reported; cost \$40,000. W. W. Dudley is the architect.

Washington, D. C.—Apartment-house.—B. B. Bradford and Henry M. Baker are considering erection of seven-story apartment-house 160x140 feet.

Washington, D. C.—Apartment-house.—Applenton P. Clark has prepared plans for five-

story apartment-house for Mrs. L. C. Plant, to be 69x120 feet and cost \$100,000.

Wheeling, W. Va.—Flats Building.—L. G. Halleck has awarded contract for erection of two-story brick flats building; cost \$10,000.

Winchester, Ky.—Business Building.—D. S. Gay contemplates erecting business building to replace one recently burned.

#### RAILROAD CONSTRUCTION.

##### Railways.

Alamo, Tenn.—Citizens of Crockett county are discussing ways and means to induce the Tennessee Western Railway Co. to commence at once the construction of this road from Humboldt through this county to Dyersburg. A representative of the company is reported to have stated that the surveying outfit had just arrived at Humboldt, and the work of surveying the line would commence at once. W. N. McDonald is chief engineer, Nashville.

Anniston, Ala.—It is reported that J. M. Barr, general manager Seaboard Air Line, offices at Portsmouth, Va., has stated that his company will have its main line from Atlanta to Birmingham completed by next January, and will then arrange for constructing the railway on to Anniston.

Atlanta, Ga.—Chartered: Atlanta Interurban Railroad Co., with capital stock of \$100,000, to build an electric railway from the Chattahoochee river at a point near Collier's bridge to Smyrna, and from there to Marietta. The company is believed to be backed by the Atlanta Railway & Power Co., owning and operating a line from Atlanta to the river. The petitioners for charter are officers and employees of Atlanta Railway & Power Co. They are Preston S. Arkright, G. W. Brine, Thomas H. Glenn, W. H. Glenn, Henry N. Hurt, S. E. Simmons, S. J. Brady, R. E. Culline, W. B. Stovall and F. M. Sisk.

Atlanta, Ga.—Fiedmont Electric Railway Co. has received the necessary franchises for the construction of its proposed extension from Atlanta to Roswell, a distance of about twenty miles.

Austin, Texas.—Kansas City, Mexico & Orient Railway has filed maps and profiles of the road to be built from San Angelo to the Rio Grande. Data concerning the line from San Angelo north to Red river had previously been filed. In Texas the road is known officially as the Panhandle & Gulf. The late maps show that from San Angelo it runs southwest, traversing the counties of Tom Green, Irion, Reagan, Upton, Crockett, Pecos, Brewster and Presidio, touching the towns of San Angelo, Fort Stockton and Alpine. The distance is about 300 miles. It will cross the Rio Grande into Mexico a few miles below Presidio Del Norte. The road is graded from Red river to Sweetwater, and grading is being pushed toward San Angelo. Tracklaying will soon commence. The company has a surveying party locating the line from San Angelo to Brownsville, a distance of nearly 500 miles, and from Brownsville it is to be built to the City of Mexico. M. P. Paget is chief engineer, Kansas City, Mo.

Austin, Texas.—R. H. Baker, vice-president and general manager Trinity & Brazos Valley Railway Co., writes the Manufacturers' Record that he is proceeding with the construction of his railway from Cleburne southeast to the coast, the first section, some eighty miles, through Hillsboro, Hubbard City to Mexia. Track has been laid some fourteen or fifteen miles out of Hillsboro southeast. About two or three miles of track is being laid per day, and the company will be operating trains on this first section during the latter part of September.

Beaumont, Texas.—Trinity & Brazos Valley Railroad will in due season arrange for the construction of a railway from Mexia to Beaumont; R. H. Baker, general manager.

Buffalo City, Ark.—M. T. Brooks, chief engineer, and Walter Harris, engineer in charge of the Boston Mountain Railway, have begun locating a line for the railroad from Buffalo City to a point of connection with the St. Louis & North Arkansas. When built this line will be from a connection of the Missouri Pacific at Buffalo City, as it is proposed to build a bridge there to connect with the North Arkansas road, which will practically be a belt line. It will afford transportation facilities for zinc-mining developments on each side of the Buffalo river.

Chattanooga, Tenn.—The statement that the Louisville & Nashville Railroad Co. will build a branch road from Wetmore, on the Atlanta, Knoxville & Northern, to this city has been revived by the inspection just made by President M. H. Smith of the Louisville & Nashville. President Smith spent some time on the Atlanta, Knoxville & Northern, and he is said to have consulted with a number of the officials of the road as to the advisability



of building the extension, and thereby opening up a rich mineral and timber territory.

Chester, S. C.—Georgetown & Mt. Pleasant Railway, recently chartered, has called a meeting for August 14 to make arrangements for constructing its proposed railway from Mt. Pleasant to Georgetown. After that section is completed it is proposed to extend the line to Chester. R. P. Miller of Chester is president.

Cheyenne, O. T.—Cheyenne & Washita Valley Railway, recently chartered, will build railway from Chickasha, I. T., to a point on the Santa Fe in the Panhandle of Texas, a distance of about 180 miles. A surveying corps will be in the field in a few days, and the construction work will soon be begun and pushed as rapidly as possible to completion. A chief engineer has not been appointed as yet. John B. Harrison is president.

Chicago, Ill.—A. C. Bird, vice-president Missouri Pacific, etc., writes the Manufacturers' Record that there is no truth in the report recently mentioned that his company will build from Wagoner to Fort Worth, Texas.

Corbin, Ky.—Louisville & Nashville Railroad has let contract to C. D. Smith & Co. of Memphis, Tenn., at about \$50,000 for constructing yards and twenty-five tracks, each a mile in length, at Corbin. This contract has been sublet to S. P. Copenhill & Co. of Cincinnati, Ohio.

Cumberland, Md.—R. H. Shearer is reported as stating that he and associates have given rights of way for a distance of eighteen miles through their coal properties in Charleston, Roane, Clay and Kanawha counties, West Virginia, to the Imboden & Odell Railway Co.

Cumberland, Md.—Within the next few days work on the Wabash connecting link between Cumberland and Cherry Run will begin at Cumberland and a point midway between. McArthur Bros. of New York, Chicago and St. Louis, contractors, have the contract for this end, and Kilpatrick Bros., contractors, of Beatrice, Neb., have the middle section. But eighteen months is allowed to complete the contract. John Q. Barlow, Baltimore, is chief engineer.

Des Arc, Ark.—Referring to the suspension of work on the proposed extension of the Searcy & Des Arc Railroad from Des Arc to De Valls Bluff, C. H. Waring, first vice-president of the Rock Island system at Chicago, has stated the suspension is merely temporary, and that work will be resumed and carried to completion later on.

Gainesville, Ga.—H. D. Jaquish and C. C. Sanders of Gainesville, M. S. Garner, G. W. Thompson and J. O. H. Brown of Beaufort, Ga.; D. B. Saneliff of Atlanta, Ga.; E. J. Mitchell of Rayhorse, Idaho; J. W. Peterson, W. W. Gorham and G. W. Winslow of Chicago, Ill., have incorporated Atlanta, Beaufort & Gainesville Electric Railway Co. to build an electrical railway from Gainesville to Atlanta by way of Flowery Branch, Beaufort, Suwannee, Duluth and Norcross. About fifty-eight miles will be its length. The nominal capital is \$100,000.

Galveston, Texas.—The statements last month as to the extension of the St. Louis, Brownsville & Mexican Railway from Sinton to Galveston and Houston are correct. The company will amend its charter and file it by September 25, after which time further details regarding the extension can be announced. F. G. Jonah, chief engineer, Allen, Texas, will have charge of the work.

Grenada, Miss.—Chester H. Pound of Morehead, Miss., is endeavoring to complete arrangements for building the proposed railroad from Grenada, Miss., to Pensacola, Fla. Colonel Pound is negotiating with business men of Memphis, Tenn., with a view to interesting them to the extent of taking stock in the new road. The line has been surveyed and is regarded as an enterprise offering great advantages, especially to Memphis, as it would give this city direct connection with one of the finest natural deep-water harbors in the country. The proposed road would also traverse a section of country rich in soil and abounding in virgin timber.

Guthrie, Okla.—A territorial charter has been granted to the Kansas Central, Oklahoma & Gulf Railroad Co., with \$30,000,000 capital, to build a railway from Eud, Okla., to New Orleans and Galveston and to Winnipeg, Manitoba; estimated length, 2900 miles. The incorporators are J. A. Koontz of Hutchinson, Kan.; D. D. Thomas and F. C. Spaulding of Kansas City, Mo.; J. N. Ledgerwood, A. H. McMahon and W. O. Jones of Guthrie.

Guthrie, Okla.—Reports state that the Santa Fe system will extend its Owasso branch from Owasso, I. T., the present southern terminus, to Honey Grove, Texas,

where connection will be made with a branch line of the Santa Fe from Cleburne northward through Dallas. Work on the Owasso extension will begin before the end of the year. This new line will be used as a business route between Galveston and the North, it being fully 100 miles shorter than the present route through Oklahoma, and its adoption means a vast saving in time between the lakes and the Southern seaboard. The building of the Havana cut-off is but a preliminary step to the extension of the Owasso branch; James Dun, chief engineer, Chicago, Illinois.

Hagerstown, Md.—Hagerstown Electric Railway Co. does contemplate the extension of its line recently referred to, and has been making surveys and securing options on rights of way. It is proposed to connect the Hagerstown & Boonesboro Railway with the Myersville & Catoctin by building a line across the South mountain, a distance of about eight miles.

Jackson, Miss.—Wirt Adams, W. Q. Cole, Andrew Nelson and other local capitalists propose organizing a company to build an electric railway from Jackson to Vicksburg. Right of way has been secured, with depot facilities at both cities, and it is said branch lines will be built to Raymond and Coopers Wells. The distance to Vicksburg is forty-five miles, and engineers have surveyed the route, estimating the cost of construction at \$15,000 per mile. New York and Chicago capital will be interested, it is stated, in the enterprise.

Jellico, Tenn.—W. J. Oliver of Knoxville, Tenn., has contract for Southern Railway's extension through the Narrows, referred to last week. He has begun construction work, and will push rapidly.

Kenova, W. Va.—It is stated that Westinghouse Electric & Manufacturing Co. of Pittsburgh is preparing estimates for the construction of an electric railway from Kenova to Charleston, a distance of sixty miles, with extensions to connect with Columbus, Ohio. A syndicate of Eastern capitalists is said to contemplate building the railway.

Little Rock, Ark.—Varner, Cummins & Eastern Railroad has completed the survey for its railway from Linwood to Watson, a distance of forty-one miles, and contract for the grading will be awarded August 15. It is said that grade work will be done by farmers along the right of way, who will work as sub-contractors, and will thus protect their crops while the work is in progress. J. A. Franklin, Morris M. Cohn and Nicholas Peay of Little Rock, T. A. Robbins of Searcy, Ark., and Henry W. Meyer of Camden, Ark., are promoting the enterprise.

Louisville, Ky.—Armour & Co. of Chicago, Ill., write the Manufacturers' Record that there is no truth in the report, mentioned last week, that they are planning an electric railway to connect their Southern distributing point with Chicago.

Louisville, Ky.—Mention was made last week of a report that the Illinois Central Railway Co. is completing arrangements for securing control of the Tennessee Central in connection with certain extensions and plans for a direct route over its own rails to the Atlantic seaboard. Referring to this report J. T. Harahan, second vice-president, office at Chicago, writes the Manufacturers' Record that his "company" has certainly made no arrangements to build or acquire any such line.

Madisonville, Ky.—Madisonville Traction Co. has been incorporated to build an electric railroad from Madisonville to Earlington and Nortonville, and probably later to connect with White Plains, all in Hopkins county. About eighteen miles is the length of the contemplated line. Capital stock is \$100,000, with privilege of increase to \$350,000, and of issuing first mortgage bonds. Joseph Huffaker, H. H. Huffaker, B. G. Huffaker and C. C. McClarty, all of Louisville, Ky., are the incorporators.

Mayking, Ky.—Work has begun on Pennington Gap Pocket & Crab Orchard branch of the Louisville & Nashville Railway, a distance of fifteen miles from Pennington Gap, penetrating a rich coal and timber section in Southwestern Virginia. Work is also in progress on the Imboden branch of the L. & N. up Pigeon creek a distance of twelve miles to the celebrated Pigeon creek coal field, and the work is to be completed by November 1; R. Montfort, chief engineer, Louisville, Ky.

McAlester, I. T.—Missouri, Kansas & Texas Railway Co. is extending its branch railroad a few miles in order to further develop its coal business. The Krebs branch is already extended east twelve miles to Gaines creek, and about twelve miles more is being built. S. R. Fisher is chief engineer; offices at St. Louis, Mo.

Monterey, Mexico.—William Scott has begun work on his contract for the construc-

tion of the Mexican National Railway's branch from Monterey to San Miguel, which will give the National entrance into Matamoros. Twenty-five miles of the distance has been graded, and the contract calls for completion of the road within fifteen months from July 1.

Morgantown, W. Va.—The Clinton Coal & Coke Co. will build a railroad four miles long at a cost of \$100,000 to facilitate the development of its coal properties. Harry B. Duncan of Washington, D. C., is the principal stockholder.

New Decatur, Ala.—Louisville & Nashville Railroad, now double-tracking its road from this city to Flint Station, a distance of seven miles south, is rumored as to begin in the near future double-tracking the road from here to Birmingham, but the rumor has not been substantiated. R. Montfort, Louisville, Ky., is chief engineer.

New Orleans, La.—F. B. Merrill's proposed railway, mentioned last week, is projected from New Orleans to the Gulf at Grand Isle, a distance of about 100 miles. New Orleans, Mobile and Eastern capital will be interested, and it is probable that a company to construct the line will be organized very soon. Mr. Merrill is of Mobile, Ala., and until recently was president of the Mobile, Jackson & Kansas City Railway.

New Orleans, La.—Chicago, St. Louis, Memphis & New Orleans Railway Co. will begin work in October on the construction of its railway from New Orleans to Baton Rouge, and hopes to complete same inside of fourteen months. The survey has practically been completed. J. F. Hinkley, chief engineer, can be addressed care L. S. Berg, president of New Orleans Terminal Co.

Oklahoma City, O. T.—The contract for the construction of a "Frisco" line to be built from Oklahoma City to Avedot, where it will connect with the Arkansas City Valley & Western Railroad, will be let in this city September 1. The survey will be finished next week. J. F. Hinkley, 800 Fullerton Building, St. Louis, Mo., is chief engineer.

Omaha, Neb.—According to reports, the Armour Packing Co. will construct and operate an electric railway from Kansas City to St. Joseph, thence to Omaha and on north to Sioux City.

Palm Beach, Fla.—Dispatches state that J. A. McLeay has completed arrangements for the construction of the Florida Grand Trunk Railway. This is proposed to extend from Dothan, Ga., through Tallahassee, along the west coast, with a branch to St. Andrews Bay. It is said that actual work was begun in May. The proposed railway is to give a short route from the north to the Panama canal, and will open up an entirely new district.

Philadelphia, Pa.—It is stated that the Wabash Railroad has under consideration plans for a line from Baltimore to Philadelphia and thence to New York. Joseph Ramsey, Jr., at St. Louis, Mo., is president.

Pittsburg, Pa.—The Wabash is considering which route will be selected in the extension of the Little Kanawha from Moatsville to Bellington. This will not be done for some time, or at least until it is decided whether the route will be along the river or across the country. The entire distance from Moatsville via the river route is about forty miles, while the other route is much shorter. Several surveying corps are at work running lines through Barbour county. It is believed the extension will run along the river and up Sugar creek.

Raleigh, N. C.—Frank D. Jones of Gulf, N. C., superintendent of Durham & Charlotte Railroad, is supervising grading now under way from Pittsboro to Greensboro, and within two weeks grading will be begun from Pittsboro. The road will be about fifty-five miles in length, along Haw River valley, passing Swepsonville, Graham, Burlington, Gibsonville, through the manufacturing territory into Greensboro. The company has a 34-mile line from Gulf, on the Southern Railway, to Star, in Montgomery county, on the Aberdeen & Asheboro. From Star the line is now being extended to Troy, seven miles distant. The track has been laid for three miles, and the remaining four are graded. Special interest is attached to construction from Pittsboro, which is on a spur of the Seaboard Air Line, into Greensboro, since it is supposed to give the Seaboard Air Line an entrance into that city. From Burlington or Graham the new line will partly parallel the North Carolina Railroad to Greensboro.

Raleigh, N. C.—North State Railroad, reported last week as chartered with capital of \$50,000, has begun the construction of its railway. This will be a short line ten miles long, intersecting the Raleigh & Cape Fear Railroad at Johnson's Mills, and extending southward, for the purpose of hauling logs and lumber to and from a manufacturing

plant. Construction has been arranged for, three miles being completed at present, and the work progressing as fast as rails can be delivered. K. B. Johnson is president; J. Beale Johnson, vice-president, and J. Lee Johnson, secretary and treasurer, all of Carthage, N. C.

Reading, Pa.—Dispatches state that engineers are surveying route for the Reading, Lancaster & Southern Railway, mentioned last week, and that the right of way has been secured for two-thirds of the distance to Baltimore. The route will necessitate a bridge across the Susquehanna river at Peach Bottom, Pa., and it is reported the Maryland & Pennsylvania Railroad will pay one-half the cost of its construction. Referring to the rumor that the Reading, Lancaster & Southern is in the interest of the Wabash, Joseph Ramsey, president of the Wabash, has stated, according to New York dispatches, that the rumor is "unqualifiedly false."

Richmond, Va.—Active work has begun on the rehabilitation of the entire system of the Virginia Passenger & Power Co. in this city and Manchester, which, when completed, will cost about \$500,000. About 200 men are now at work, and more will be put on when necessary, and the work will be rushed as fast as possible. Already 1300 tons of steel rails have begun arriving. The Seven Pines line is to be rebuilt from end to end, including new roadbed, new ties, rails, overhead wires and new cars. The Lakeside, Forest Hill and Hull street lines are to be completely renovated also. These betterments were decided on recently.

Russellville, Ky.—Southern Kentucky Interurban Traction & Power Co. has been incorporated to construct and operate by electricity or other motive power a railway from Russellville, Ky., through the counties of Logan, Simpson, Warren, Allen, Butler, Muhlenberg, Todd and Christian. The capital stock is \$125,000. Incorporators: C. W. Courts, J. M. McCutchen, J. C. Browder, J. R. Crewdson, R. P. Manly, R. R. Clark, J. W. Clark and others. The charter is perpetual, and the company is privileged to carry express or passengers.

Smithtonia, Ga.—Chartered: Smithtonia & Northern Railroad, to run for a distance of twenty miles in the counties of Oglethorpe and Madison. Incorporators: Jas. M. Smith, David W. Meader, Stephen Coleley, Leonidas E. Green, R. H. Kinnebrew, B. N. White, J. H. Power and C. W. Johnson. The capital stock is \$50,000.

St. Augustine, Fla.—Jacksonville capitalists propose constructing an electric street railway, and an ordinance asking for street privileges is now being prepared for introduction into the city council. "The Mayor" can state who is interested.

Wheeling, W. Va.—Wheeling-West Liberty Belt Line Co. has received franchises for constructing its proposed railway from Stackyards to Greggsville.

Wheeling, W. Va.—Wheeling & Elm Grove Railway is pushing the construction of its extension to West Alexander, and surveys are being made beyond that town. Reports say the company will build into Washington, Pa., and that arrangements for this are now being made.

Whitehouse, Ky.—Chesapeake & Ohio Railway has completed 40 per cent. of the grading for its extension up the Big Sandy river from Whitehouse to Elkhorn City, a distance of seventy-seven miles; F. W. Scarborough, engineer maintenance of way, Richmond, Va.

#### Street Railways.

Clarksville, Tenn.—Clarksville Electric Street Railway will extend its lines over various streets of the city and into the suburbs. Additional franchises for this have been secured.

Fort Worth, Texas.—Robert McCart and associates have received franchise for the construction of their proposed electrical street railway.

Grafton, W. Va.—Grafton Street Railway Co. begun work this week on the preliminary survey of the route to be traversed by its proposed electric railway.

A. D'Olier Reminder.—A mailing card now being distributed refers to the steam and electric turbine pumps offered by the D'Olier Engineering Co. of 74 Cortlandt street, New York. These machines are of high efficiency. The features are summarized as light foundations, small space required, interchangeable parts, no valves, bronze runners, no vibration, perfect balances. The company named is well known as mechanical and electrical engineers and contractors. Its Philadelphia offices are at 119 South Eleventh street. Its Southern offices are at 9 North Calvert street, Baltimore, and in the Empire Building, Atlanta.



**Machinery, Proposals and Supplies Wanted.**

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

**Approaches.**—H. M. Adams, lieutenant-colonel, engineers, United States engineer office, custom-house, New Orleans, La., will receive sealed proposals until August 18 for constructing approaches, including excavation and fill of lock, at Plaquemine, La. Information furnished on application.

**Bank Furniture.**—Wm. Bailey, president, Louisville, N. C., wants prices on counters and complete equipment of bank furniture.

**Belting.**—J. C. Burruss, Atlanta, Ga., is in market for leather belting for two oil mills.

**Belting.**—See "Electrical Equipment."

**Boiler and Engine.**—See "Mining Equipment."

**Boilers.**—Schwarz System Brick Co., 8-10 Bridge street, New York, N. Y., desires proposals on two new Scotch marine boilers 100 and 125 horse-power, working pressure 125 pounds.

**Bottling Machinery.**—Tropical Manufacturing Co., 14 West Adams street, Jacksonville, Fla., will require something in the way of a labor-saving device for bottling.

**Bridge and Stone Contractors.**—Sealed proposals will be received by county court of Wetzel county, West Virginia, at New Martinsville, W. Va., until August 24 for construction of steel bridge across South Fork at Jacksonburg, according to plans on file in office of J. D. Morgan, clerk; length, 140 feet; width, 16 feet. Also bids will be received at same time and place for the stone abutments for said bridge, also for stone abutments for bridge at Smithfield. Usual rights reserved.

**Bucket.**—Edward McDowell, 147 Ivy street, Atlanta, Ga., wants a nine cubic foot orange peel grapple bucket (Hayward preferred).

**Building Materials.**—Hayes & Fuller and K. P. Hill, Louisville, N. C., want roofing, etc.

**Building Materials.**—Allen Bros., Louisville, N. C., want roofing, sash, doors and blinds.

**By-product Equipment.**—Frank T. Crump, P. O. Box 18, Richmond, Va., is interested in the production of wood alcohol, acetic acid, naphtha, charcoal, etc., from sawdust, and wants full information regarding machinery necessary, prices, etc.

**Cash-carrier System.**—F. N. & R. Z. Edgerton, Louisville, N. C., want to correspond with manufacturers of cash-carrier systems; also basket system for carrying packages.

**Concrete Construction.**—John Stephen Sewell, captain, engineers, United States engineer office, Washington Barracks, D. C., will receive sealed proposals until August 14 for reinforced concrete construction. Information furnished on application.

**Construction Work.**—Street committee of council, Newport News, Va., will receive bids until September 7 for construction of foundations, masonry and excavations for footing courses of abutments, piers and pedestals for proposed undergrade crossing at Twentieth street and C. & O. railway tracks, in accordance with plans and specifications on file in city engineer's office. Separate bids will also be received for excavating the undergrade crossing according to plans on file with city engineer; same to be submitted per cubic yard. Certified check for \$500 must accompany each bid; usual rights reserved; W. L. Cooke, city clerk.

**Cotton Machinery.**—Bailey-Arnold Manufacturing Co., Athens, Ga., wants machinery for manufacturing cord, rope, twine and webbing.

**Cottonseed-oil-mill Machinery.**—Bhupati Nath Bhoose, 77 Sitaram Ghose's street and 17 Extra street, Calcutta, India, wants prices and full information regarding cottonseed oil-mill machinery.

**Dredge.**—J. C. Sanford, captain, engineers, United States engineer office, Witherspoon Building, Philadelphia, Pa., will receive sealed proposals until September 5 for constructing one twin-screw suction dredge for Savannah harbor, Georgia. Information furnished on application.

**Electrical Equipment.**—Hillsboro Grain & Elevator Co., Hillsboro, Texas, will need some belting and one 25-horse-power electric motor.

**Elevators.**—See "Heating Apparatus."

**Engine.**—Spray Woolen Mills Co., Spray, N. C., wants 125 to 150-horse-power second-hand Corliss engine; give make, age and best price.

**Fire Pump.**—John Marshall & Co., Apalachicola, Fla., want second-hand steam fire pump, six-inch bore on steam end.

**Heating Apparatus.**—Jones House Furnishing Co., Little Rock, Ark., will want steam-heating plant, electric freight and passenger elevators.

**Ice Plant.**—J. Michael Guily, treasurer and general manager, Salisbury Ice & Fuel Co., Salisbury, N. C., wants bids on 150-horse-power boiler, ammonia and steam condensers, 10-ton steel brine tank and coils, cans and other equipment necessary for ice plant.

**Irrigating Equipment.**—Ganado Canal Co., A. S. Dwigans, president and manager, Ganado, Texas, will need two 10 or 12-inch pumps, with machinery necessary to operate same.

**Iron and Steel Manufacturers.**—W. H. Carr, Rochelle, Ga., wants to correspond with manufacturers of iron and steel relative to having a patent device manufactured.

**Jail Equipment.**—Wm. Weber, Beaumont, Texas, will want prices on steel cages, cells, etc., for jail.

**Laundry Equipment.**—Palmetto Grocery Co., Mullins, S. C., wants to correspond with manufacturers of steam-laundry outfits.

**Library Equipment.**—Adams & Bearden, Chattanooga, Tenn., want bids on complete equipment for library building, including furnishings, stacks, table, chairs, magazine and paper racks, etc.

**Lumber-mill Equipment.**—Whitesville Lumber Co., Whitesville, N. C., will later on purchase steam feed and other equipment.

**Machine Tool.**—Citizens' Light & Transit Co., Pine Bluff, Ark., is in market for a 24-inch swing lathe. Address J. B. Trescott, general superintendent.

**Metal-working Machinery.**—Smith Bros., Fig. Va., want to correspond with manufacturers of machinery for making metal trade checks and due bills.

**Mining Equipment.**—Clear Air Anthracite Coal Co., Roanoke, Va., will need coal-mining equipment.

**Mining Equipment.**—Crittenden Coal & Coke Co., H. H. Sayre, general superintendent, Marlon, Ky., is in market for hoisting engine and boiler, wire rope, scales and weigh basket.

**Paving.**—C. H. Winterhalter, mayor, Lake Charles, La., will receive bids until September 1 on 19,500 square yards of brick or asphalt paving. Write C. M. Boren, city engineer, for plans and specifications.

**Pumps.**—See "Irrigating Equipment."

**Railway Equipment.**—Edgar S. Low Co., Empire Building, Pittsburgh, Pa., is in market for twelve standard-gauge American-type locomotives, weighing thirty to forty tons, ready for service.

**Railway Equipment.**—Peacock's Iron Works, Selma, Ala., is in market for 18-ton 36-inch-gauge Dinkey engine for iron track.

**Railway Equipment.**—Apex Equipment Co., No. 11 Broadway, New York, is in market for two geared locomotives, twenty to forty tons weight, and both standard gauge.

**Scenery.**—Auditorium Company, Gentry, Ark., wants prices on scenery for new auditorium.

**Shell-loading Machine.**—E. A. Beall Co., Columbia, S. C., wants machine for loading empty shells.

**Standpipe.**—W. W. Whittington, Jr., secretary Insane Asylum for Colored People, Alexandria, La., will open bids September 7 for furnishing material, labor and construction, including concrete foundation, of a steel standpipe 12 feet in diameter and 100 feet high. Bidders will furnish their own plans and specifications. Each bid to be accompanied by certified check for \$500. Bids will also be received for boring of a well to produce not less than 100,000 gallons of water every twenty-four hours. Usual rights reserved.

**Street Paving.**—John E. Lynn, secretary Improvement committee, Carrollton, Mo., will open bids August 18 for furnishing material and constructing 6600 square yards of vitrified brick pavement upon a macadam base, including crossing walks, new curbing and resetting old curbing. Certified check for 2½ per cent. of amount of each must accompany bids. Specifications and bidders' blanks supplied on application. Usual rights reserved.

**Textile Machinery.**—See "Cotton Machinery."

**Vaults.**—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids August 17 (instead of August 5, as lately reported) for new vaults (except vault doors), cashroom, office of United States treasurer and work incidental thereto, in the United States Treasury Department Building, Washington, D. C.

**Well-drilling.**—See "Standpipe."

**Well-drilling Equipment.**—Marksville Oil & Mineral Co., Ltd., A. V. Saucier, president, Marksville, La., will buy complete equipment for development of oil wells, including drills, etc.

**Woodworking Machinery.**—R. J. Burnette, Palmetto, Fla., will want novelty scroll and turning machines.

**TRADE NOTES.**

**Cordeman Machine Co.**—Cordeman wood-working machinery has for some years been among the most successful of its character on the market, and an announcement concerning its manufactures will interest users and the general trades. Cordeman Machine Co. has been succeeded by The Cordeman Machine Company, Incorporated, and the designing and building of modern wood-working machines of every description will be continued at the old plant and offices on Butler street, Cincinnati, Ohio.

**Ford Auger Bit Co.**—Increasing demands for the product of the Ford Auger Bit Co. of Holyoke, Mass., have made it necessary that the company provide increased facilities. In effecting this the property formerly owned by the Massachusetts Screw Co. has been purchased. It consists of a four-story 40x155-foot building and an L 34x65 feet, to which will be built an addition 65x55 feet for a forgeroom. The plant will be operated by water-power. The demand for the Ford patent auger bit and ship auger has been steadily increasing for many years, and the business for the first six months of 1903 was 50 per cent. greater than during the same period last year. Only the highest grade of tools is made by the Ford Company, and it is stated that the new plant will be the largest bit and auger factory in the world.

**Wood Graining in Slate.**—Innovations in building materials have been numerous during recent years. In selecting materials nowadays the owner of a building has a multitudinous list from which to make selections. To this list is soon to be added a material which is doubtless destined to be in great demand in all parts of this country, and probably in other countries also. The new material is slate into which wood graining has been burned. It is to be used for tiling, wainscoting, mantels, table tops, etc. A specimen of this presents a most handsome appearance, and no one interested in building materials can afford to neglect investigating and obtaining further particulars. The Southern Mantel & Grate Manufacturing Co., composed of Messrs. Wm. G. Melvin and W. R. Temple, Newport News, Va., is to introduce the new article. This company is a well-known manufacturer of slate, iron and wood mantels, grates, fenders, etc., and dealers in American and imported tiling, roofing slate, plumbers' slate, etc.

**New Asbestos Plant.**—It is stated that the problem of how to utilize carbonate of magnesia in order to obtain for pipe and boiler covering the greatest possible amount of heat and retaining efficiency has been solved by the Asbestos Manufacturing Co. of Philadelphia. This company will build at once a \$250,000 plant for manufacturing this and other products. The buildings will be constructed of stone, to include a three-story main shop 67x265 feet, a boiler-house 20x30 feet, a dryer-house 40x80 feet, and a four-story elevator building 30x60 feet. The company owns an extensive tract of land at Port Kennedy, where the plant will be located, from which is quarried the dolomite rock to be used in the process of manufacture. The new plant will produce carbonate of magnesia and various other products manufactured therefrom, such as 85 per cent. magnesia steam pipe covering, magnesia cement, etc. The present line of asbestos materials, including pipe and boiler coverings, building and roofing papers, etc., will also be continued. This new plant is designed to produce 30,000 pounds of pure carbonate of magnesia daily. Good railroad facilities are afforded by the Philadelphia & Reading Railroad, who are placing sidings and spurs running directly into the new works. The officers of the company are: President, Michael Ehret; vice-president and treasurer, Alvin M. Ehret; secretary, Alonzo Gibbons; general manager, George P. Wilson. These and Harry S. Ehret are the directors.

**Pumping Water by Compressed Air.**—There has been on the market several years a pump which utilizes compressed air from any convenient source of generation for elevating modern and large quantities of air. This pump is used for draining mines and other purposes. It consists of one or two water chambers adapted to be submerged at the source of water supply, and an automatic air valve located above the water and connected with the chambers by air pipes as shown. The automatic air valve directs compressed air to and from the water chambers, from which the water is alternately discharged by the direct action or displacement of compressed air, without the intervention of pistons or other complicated mechanism. By the use of two cylinders a perfectly steady discharge of water is obtained. The automatic air valve is by far the most important part of the apparatus. It is actuated solely by compressed air applied on differential surfaces, and is entirely independent of the water chambers, in which there are no floats or other valve-actuating mechanism whatever. The automatic air valve is constructed of cast iron, with brass cylinder lining, containing differential piston valves. The piston valves are kept pressure-tight by the use of pliable packings, which are held out by brass tension rings. These packings, being above the water, only come in contact with compressed air, which, during compression, absorbs sufficient oil to thoroughly lubricate the packings. It is claimed that these packings will remain perfectly tight for several years under ordinary conditions. They are the only wearing parts of the valve, and can be easily and cheaply renewed if necessary. The water chambers are mounted upon a base casting, which contains screened annular water-inlet openings and foot valves of large area. A branch discharge pipe, having extensions, with discharge valves thereon near the bottom of the chambers, forms a connection for the top of the chambers, as shown. The water chambers may be of any shape or size or of any material to conform to the requirements and conditions of the liquids pumped. This pump is manufactured by H. L. Frost, Bristol, Tenn.

**TRADE LITERATURE.**

**Toomey's Machinery List.**—Demands for second-hand machinery of standard make, in good operating condition, continue to be noted. Frank Toomey, 127 North 3d street, Philadelphia, has one of the best assorted stocks now offered to buyers, and his new list will interest all buyers of boilers, engines, woodworking machines, metal-working devices, machine tools, shafting and other equipment for power and manufacturing. Having his own machine shop, Mr. Toomey personally supervises the overhauling of all his second-hand machinery before shipping, and guarantees all sales to be as represented. Requests for the latest Toomey list are invited.

**Myers' New Catalogue.**—For more than a third of a century Messrs. F. E. Myers & Bro. have directed their best efforts to the production of a high-grade line of hay tools, power, well, house and spray pumps, flexible door hangers, store ladders, bicycle stands and other specialties. The firm's success is well known to thousands of satisfied users of its tools and to the trade throughout the country. Myers & Bro. have issued their latest catalogue, No. 38, describing and illustrating their double-acting force and lift, hand, windmill and power pumps, hay carriers, forks, steel tracks, etc. In design, material, workmanship and finish these products will be found fully up to date. Address the firm at its extensive plant in Ashland, Ohio, for copies of the catalogue.

**Steel Tanks.**—Circular black steel tanks for gas, air and water, for use as blow off, receiving, drip, pressure and hot water vessels, are extensively used. Modern material and methods of manufacture, together with designs after tried engineering plans, combine to give users such steel tanks as will fully perform, with entire satisfaction even to the most exacting, the service for which they are intended. One of the best known and most successful builders of circular black steel tanks is the A. D. Granger Co., New York offices at 95 and 97 Liberty street, and Philadelphia offices in the Stephen Girard Building. This company's Bulletin No. 1 presents a complete series of tables covering sizes, weights, capacities and prices of the Granger tanks. With this catalogue and discount sheet every requirement may be figured directly by the steamfitter or plumber. Every detail necessary in bidding on a contract is furnished in the bulletin. For ten years the Granger Company has been supplying its tanks to the steam-heating, plumbing and elevator trade. Correspondence can be addressed to either office address given.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

## THE SEABOARD DEAL.

## It Will Be a Mighty Factor in Southern Development.

The magnificent courage and ability of John Skelton Williams and J. W. Middendorf, which have enabled them during the last few years to weld a lot of disjointed roads into the compact system known as the Seaboard Air Line, find, so far as the South is concerned, a fitting climax in the deal which makes the Seaboard a part of the great Rock Island and Frisco system. The work of Messrs. Williams and Middendorf has been a great power for the good of the South, and it will be gratifying to know that their connection with the Seaboard, and thus with the railroad interests of the South, is not changed. In fact, the combination brings to the Seaboard financial and traffic connections which must have a very important bearing on the upbuilding of the South. With the wide ramifications in railroad and financial circles of the Rock Island group of capitalists a new influence is brought into Southern development which will necessarily have a stimulating effect upon the trend of capital southward, the industrial upbuilding of this section, and the movement of Western freight through Southern ports. With this combination added to the movement of the Goulds in the Southwest and tending to the Central South, and the Illinois Central's plans for getting into the Alabama coal and iron regions, the South becomes the theater of the greatest railroad activities of the day. This combination, moreover, is the logical outcome of plans which were formed when the Kansas City, Memphis & Birmingham line, now a part of the Rock Island and Frisco system, was projected many years ago. When that road was built from Kansas City to Birmingham, its owners looked to Savannah as its eastern terminus, never intending to stop at Birmingham, but they were in advance of the times, and the system halted for some years at Birmingham. It has been regarded as almost inevitable that either through a connection with the Seaboard, the two meeting at Birmingham, or else through an independent line, this road would have to find an outlet at South Atlantic and Gulf ports in order to handle its share of the rapidly-expanding Western traffic seeking a foreign outlet through Southern ports. The Seaboard now becomes, through its interest in the Washington-Southern Railway and through its connections at Southern ports, extending from Baltimore to Norfolk, Wilmington, Savannah, Jacksonville and Fernandina, the Southern and Eastern outlet for the traffic of many thousands of miles of road operating through the most populous and well-developed agricultural and industrial sections of the great West and Southwest. In developing the Seaboard to the point

where it has become this essential factor in so great a combination, Messrs. Williams and Middendorf have rendered to the South an invaluable service, and now in effecting such a combination they have given to Southern development the greatest stimulation which it has had in the last decade.

The following official announcement of the deal was given out on Wednesday in New York by Ladenburg, Thalmann & Co. shortly before the close of business on the Stock Exchange:

"Ladenburg, Thalmann & Co. announce that they have completed negotiations whereby new and important interests have become identified with the Seaboard Air Line Railway.

"B. F. Yoakum and H. Clay Pierce, B. S. Guinness of Ladenburg, Thalmann & Co., and Oakleigh Thorne, president of the North American Trust Co., have been elected voting trustees of the Seaboard Air Line Railway.

"President John Skelton Williams also announces that B. F. Yoakum, H. Clay Pierce, B. S. Guinness, Oakleigh Thorne and F. B. Van Vorst have been elected directors of the Seaboard Air Line Railway."

The new directors take the places of F. R. Pemberton of New York, R. C. Davidson, Baltimore; E. B. Addison, Richmond, and W. W. Mackall, Savannah.

The other voting trustees are John Skelton Williams, James H. Dooley, C. Sidney Shepard and William A. Marburg. The other directors are John Skelton Williams, James H. Dooley of Richmond, J. William Middendorf of Baltimore, S. Sidney Shepard of New Haven, N. Y.; Ernst Thalmann of New York, William A. Marburg of Baltimore, George W. Watts of Durham, N. C., and James M. Barr of Norfolk, Va.

Hampton Roads Railway & Electric Co. of Newport News, Va., has filed a mortgage on its plant for \$300,000 to cover a bond issue for improvements.

## SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending August 11.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	77½	79
Alken Mfg. Co. (S. C.).....	90	125
Anderson Cotton Mills (S. C.).....	63	63
Augusta Factory (Ga.).....	90	95
Avondale Mills (Ala.).....	103	103½
Belton Mills (S. C.) (old).....	98½	98½
Bibb Mfg. Co. (Ga.).....	100	100
Brandon Mills (S. C.).....	95	95
Buffalo Cotton Mills (S. C.) Pfd.....	100	100
Chiquola Mfg. Co. (S. C.).....	98	98
Clinton Cotton Mills (S. C.).....	98	98
Columbus Mfg. Co. (Ga.).....	125	125
Courtenay Mfg. Co. (S. C.).....	90	97
Darlington Mfg. Co. (S. C.).....	100	100
Eagle & Phenix Mills (Ga.).....	102	102
Easley Cotton Mills (S. C.).....	85	85
Enoree Mfg. Co. (S. C.).....	90	90
Enterprise Mfg. Co. (Ga.).....	150	150
Exposition Cotton Mills (Ga.).....	96	97½
Gaffney Mfg. Co. (S. C.).....	153	153
Granby Cot. Mills (S. C.) 1st Pfd.....	102	102½
Greenville Mfg. Co. (S. C.).....	100	100
Grendel Mills (S. C.).....	202½	202½
Henrietta Mills (N. C.).....	78	86
King John P. Mfg. Co. (S. C.).....	110	110
Lancaster Cotton Mills (S. C.).....	100	100
Lancaster Cotton Mills (S. C.) Pfd.....	90	90
Langley Mfg. Co. (S. C.).....	170	170
Laurens Cotton Mills (S. C.).....	95	95
Lockhart Mills (S. C.).....	100	100
Louise Mills (N. C.) Pfd.....	89	100
Manchester Cotton Mills (S. C.).....	107	112
Marlboro Cotton Mills (S. C.).....	170	170
Mayo Mills (N. C.).....	90	90
Mills Mfg. Co. (S. C.) Pfd.....	103	103
Newberry Cotton Mills (S. C.).....	120	120
Olympia Cotton Mills (S. C.).....	100½	100½
Olympia Cotton Mills (S. C.) Pfd.....	98	98
Odell Mfg. Co. (N. C.).....	102	102
Orangeburg Mfg. Co. (S. C.) Pfd.....	102	102
Orr Cotton Mills (S. C.).....	100	102

Pacolet Mfg. Co. (S. C.).....	105	110
Pelzer Mfg. Co. (S. C.).....	168½	168½
Piedmont Mfg. Co. (S. C.).....	173	181½
Poe, F. W., Mfg. Co. (S. C.).....	141	141
Richland Cotton Mills (S. C.) Pfd.....	98	98
Roanoke Mills (N. C.).....	102	102
Saxon Mills (S. C.).....	100	105
Sibley Mfg. Co. (Ga.).....	66	66
Southern Cotton Mills (N. C.).....	95	95
Spartan Mills (S. C.).....	133	133
Trion Mfg. Co. (Ga.).....	125	150
Tucapau Mills (S. C.).....	142	142
Union Cotton Mills (S. C.).....	152	152
Union Cotton Mills (S. C.) Pfd.....	102½	102½
Victor Mfg. Co. (S. C.).....	129	133
Warren Mfg. Co. (S. C.).....	100	101½
Warren Mfg. Co. (S. C.) Pfd.....	107	107
Washington Mills (Va.).....	10	20
Washington Mills (Va.) Pfd.....	101	101
Wilmington Cot. Mills (N. C.) Pfd.....	100	100
Wiscasset Mills (N. C.).....	118	118
Woodruff Cotton Mills (S. C.).....	95	100

## New Corporations.

Continental Savings & Trust Co. of Fort Worth, Texas, will establish a branch bank at North Fort Worth.

L. L. Dirickson of Snow Hill, Md., and others propose organizing a national bank at Northeast, Md., with a capital of \$25,000.

Bank of Donalds has been chartered, with capital of \$25,000, by W. K. Stringer, R. A. Lewis and W. R. and J. J. Dunn, all of Donalds, S. C.

Citizens' Bank of Geronimo, O. T., has been authorized to commence business. W. M. Porter is president; J. Porter, cashier, and \$5000 is the capital.

A new bank is being organized at Rochepot, Mo., with capital stock of \$10,000. Robert C. Cochrane of Rochepot and E. W. Hinton of Columbia, Mo., are interested.

Montford Investment Co. of Baltimore, Md., has been incorporated by Joseph M. Hunter, James F. Gillespie, Arthur C. Howard, Clarence R. Evans and Horace R. Ford.

Capron State Bank of Capron, O. T., has been authorized to commence business with a capital of \$10,000. H. Kaufman is president, and C. D. Semple, cashier.

John L. Swink and James McCausland of Maplewood, Mo., and R. A. Swink of Farmington, Mo., have incorporated the Bank of Maplewood, with a capital stock of \$12,000.

A new bank with capital stock of \$10,000 is proposed to be organized to acquire the assets, etc., of the Bank of Devall's Bluff, Devall's Bluff, Ark. Wm. H. Morrow is interested.

W. A. Bowman of Sumter, S. C., and C. W. Buchamer of Statesville, N. C., have petitioned for a charter for the Sumter Banking & Mercantile Co., to have a capital stock of \$50,000.

W. W. Wilson, J. D. Wilson, T. J. Record, G. W. Blakeney, T. Oakes and R. E. Wilbor will incorporate the Choctaw Exchange Bank of Hugo, I. T., with a capital stock of \$25,000.

Paden City Bank of Paden City, W. Va., has been incorporated, with capital of \$50,000, by H. W. McCoy, R. Miller, G. E. Work, H. B. Shriver and James R. Stathers of Sistersville, W. Va.

The Bank of Carteret, recently chartered at Morehead, N. C., has organized, with R. W. Taylor, president; W. S. Chadwick, vice-president, and W. M. Webb, cashier. The capital is \$10,000.

The proposed bank at Shenandoah, Va., will organize with a capital stock of \$25,000. George W. Kite will be president. Messrs. W. B. Sprinkel, D. W. Wyant, Isaac Shuler and others will be interested.

Enterprise Banking Co. of Enterprise, Ala., has been incorporated, with capital stock of \$50,000, and begun business on August 4. W. C. Neal is president; W. B. Glenn, vice-president; S. B. McGee, cashier, and Charles Faircloth, assistant cashier.

Virginia Title Co. of Norfolk, Va., has been incorporated, with a nominal capital of \$10,000 and an authorized capital of

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\$100,000, for examining and guaranteeing titles. Joseph Allyn is president; Walter H. Taylor, vice-president; N. Beaman, secretary, and M. T. Friory, treasurer.

The Bank of Independence, Independence, La., and the Bank of Amite City, Amite, La., have merged and will organize as a banking and trust company, with capital stock of \$100,000. Branches will be established at Independence and Tangipahoa, with principal office at Amite.

J. W. Norwood and L. W. Parker of Greenville, S. C.; T. C. Duncan of Union, S. C.; T. B. Stackhouse, J. H. Sloan, H. A. Ligon, R. I. Woodside and E. D. Foster of Spartanburg, S. C., and others have incorporated the Southern Trust Co. of Spartanburg, S. C. The capital stock is \$100,000, with privilege of increasing to \$250,000.

[For Additional Financial News, See Pages 28 and 29.]



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17 S. Calvert St., BALTIMORE.

High-grade Investment Bonds, Municipal, Railway, Industrial.

Letters of Credit Available Everywhere.

**CONDENSED STATEMENT OF THE**  
**First National Bank of Richmond, Va.**

JUNE 9, 1908.

**RESOURCES.**

Loans and Discounts	\$3,551,735.78
U. S. Bonds at par	612,500.00
Overdrafts	40.75
Other Stocks and Bonds	418,907.78
Banking House and other Real Estate	60,442.73
Cash and Due from Banks	903,196.70
	\$5,542,521.69

**LIABILITIES.**

Capital	\$500,000.00
Surplus and Profits (net)	552,240.46
Reserve for Interest	7,658.72
Circulation	591,400.00
Deposits	3,280,621.51
U. S. and Va. Bond Account	408,500.00
	\$5,542,521.69

**Calvin N. McAdoo**

Banker and Broker,

GREENSBORO, N. C.

MEMBER

New York Cotton Exchange.

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Consolidated Stock Exchange.

Private Wires to all Exchanges.

Southern Securities a Specialty.

Jacob Phinizy, Pres. Chas. G. Goodrich, Cash.  
Hamilton H. Hickman, Vice-Pres.

**Georgia Railroad Bank,**

AUGUSTA, PA.

Capital, \$200,000.00 Undivided Profits, \$201,585.63  
Commenced Business December 31, 1892.

Members Baltimore Stock Exchange.

**J. WM. MIDDENDORF & CO.****BANKERS AND BROKERS,**

Continental Trust Bldg.

Baltimore, Md.

Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished. Private Wire to New York and Richmond.

**Merchants' & Farmers' Nat. Bank**

CHARLOTTE, N. C.

Capital, \$200,000. Surplus and Profits, \$75,000.

Prompt and intelligent attention to all business entrusted to us. Correspondence invited.

Dr. J. H. McAden, Pres. Geo. E. Wilson, V. Pres.  
C. N. Evans, Cash. W. C. Wilkinson, Asst. Cash  
N. Y. Correspondent:  
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**Spencer Trask & Co.****BANKERS**

William & Pine Sts., New York

**Investment Securities.**

Members New York Stock Exchange.

Branch Office, Albany, N. Y.

**Savannah Trust Company,**

13 Bay St., East, SAVANNAH, GA.

Capital, \$500,000.

Executes trusts of every description.  
Accepts deposits and allows interest  
on daily balances.  
Collections promptly handled.

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GEO. J. BALDWIN, Vice-President.  
WM. V. DAVIS, Secretary and Treasurer.

**JOHN L. WILLIAMS & SONS,****BANKERS,**

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**Southern Investment Securities**

MUNICIPAL BONDS A SPECIALTY.

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**EDWARD H. THOMSON & SONS,****Bankers and Brokers,**

10 South Street, BALTIMORE.

Members of Baltimore Stock Exchange.

Dealers in High-Class Securities.

Collateral Loans Negotiated.

**MARYLAND TRUST CO.**

N. W. Cor. Calvert and German Sts.

BALTIMORE.

CAPITAL, - - \$2,125,000.00  
SURPLUS, - - 2,437,500.00

A LEGAL DEPOSITORY FOR COURT  
AND TRUST FUNDS.  
SAFE DEPOSIT BOXES FOR RENT.

Acts as Financial Agent for States,  
Cities, Towns, Railroads, and other  
Corporations. Transacts a General  
Trust Business. Lends money on ap-  
proved security. Allows interest on  
special deposits. Acts as Trustee under  
Mortgages, Assignments and  
Deeds of Trust; as Agent for the  
Transfer or Registration of Stocks  
and Bonds and for the payment of coupons,  
interests and dividends.

J. WILLCOX BROWN, President.  
HENRY J. BOWDOIN, First Vice-Pres.  
LLOYD L. JACKSON, Second Vice-Pres.  
ALLAN McLANE, Third Vice-Pres.  
CARROLL VAN NESS, Sec. and Treas.  
L. S. ZIMMERMAN, Asst. Sec. & Asst. Treas.

**DIRECTORS.**

J. Willcox Brown, Henry Walters,  
Wm. A. Marburg, H. A. Parr,  
Lloyd L. Jackson, B. N. Baker,  
Geo. A. von Lingen, Andrew D. Jones,  
H. J. Bowdoin, James Bond,  
Joshua Levering, John A. Tompkins,  
W. B. Brooks, Jr., Clayton C. Hall,  
Josiah L. Blackwell,  
Fred'k W. Wood, George C. Jenkins,  
Seymour Mandelbaum, John Pleasants,  
Leopold Strouse, L. F. Lorcee,  
J. Southgate Lemmon,

**Hugh MacRae & Co.****Bankers,**

MISCELLANEOUS SOUTHERN SECURITIES,

**COTTON MILL STOCKS**

WILMINGTON, N. C.

WASHINGTON, D. C., (Kellogg Building.)

**International Trust Company**

OF MARYLAND,

BALTIMORE.

Capital, \$2,000,000.00

Surplus, \$1,515,772.74

Deposits subject to check received  
in our Banking Department and  
interest allowed on average daily  
balances.

Special rates of interest allowed  
on deposits for a specified period of  
three months or longer.

Write for further particulars.

**4 % Certificates of Deposit.**

Due March 1, 1908.  
Interest payable quarterly.

**Coupon Certificates of \$1000 each.**

The above certificates are engraved,  
in coupon form, issued to bearer, with  
provision for registration of Principal,  
in denominations of \$1000 each, interest  
at four per cent. per annum, payable  
March, June, September and December.  
The holder of these certificates, by  
giving sixty days' notice in writing, can  
obtain payment of principal on any  
interest date.

ISSUED BY

**The Continental Trust Co.**

BALTIMORE.

Capital and Surplus, \$5,340,000.

Interest paid on deposits subject to check.

Largest Capital of Any Bank or Trust Company in the  
South Atlantic States.

**RICHMOND TRUST**

AND

**SAFE DEPOSIT COMPANY.**

N. W. Corner  
10th and Main Streets.

RICHMOND, VA.

CAPITAL, \$1,000,000

Does a general Trust Company business. Acts in all Fiduciary capacities. Receives deposits and allows interest thereon.

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Vice-Presidents, - JAMES H. DOOLEY,  
HENRY L. CABELL,  
Treasurer, - - LEWIS D. CRENSHAW, Jr.

CORRESPONDENCE INVITED.

*Americans***MANILA-SISAL-JUTE CORDAGE**

THE AMERICAN MFG. CO., 65 Wall Street, New York,  
makes everything in this line from a small India Twine to an  
18" Turned Hawser. They are the largest fibre workers in  
the world.



"American" Transmission Rope, 2" dia.,  
coils 2500 ft. long without splice.

**"AMERICAN" TRANSMISSION ROPE**

is standard

Every Mill Owner, Superintendent and Engineer should have a copy of "A Little Blue Book on Rope Transmission." A postal card will bring it

*Ropes*

George F. Otto, William T. Prescott, William R. Holman, Andrew S. Griffin, Benjamin W. Norton and others have incorporated the Junior Order United American Mechanics Building Association of Savannah, Ga. The capital is \$30,000, with privilege of increase to \$50,000.

Security Trust Co. of South McAlester, I. T., has been incorporated by H. H. Kirkpatrick, E. C. Young, A. U. Thomas, E. E. McIntosh and Arthur Devlin. Mr. Kirkpatrick is president; Mr. McIntosh, vice-president; Mr. Thomas, treasurer, and Mr. Young, secretary. The capital stock is \$25,000.

The Union Bank & Trust Co. of Meridian, Miss., has effected an organization under the charter recently obtained. President, G. W. Meyer; vice-presidents, O. L. Mackay and E. B. McRaven; cashier, A. C. Hunter; assistant cashier, E. L. Carter; counsel, S. M. Houston. The capital is \$150,000.

Ozark Insurance Co. of Fort Smith, Ark., has been chartered by E. H. Stevenson, president; A. J. Ingle, vice-president; James B. Moore, secretary; George W. Moss, treasurer; Hilliard Bryan, auditor; Houston J. Payne, I. R. Arbogast, F. F. Stevens, J. K. Kimmons, John Gilmore, J. E. Finney, J. Perry Wheeler.

Members of the Texas State Ginnery Association will organize a company for insuring gin properties. It is said that \$1,000,000 has been subscribed. J. W. Spivey of Aquilla, Texas, will be president; R. J. Garrett of Strainger, Texas, vice-president; A. W. Watson of Brenham, Texas, secretary, and Heber Stone, also of Brenham, treasurer.

W. H. Dodd and W. L. Ady, Birmingham, Ala., propose organizing a life insurance company, with capital stock of \$100,000, at Louisville, Ky. Mr. Dodd was president and general manager of the Southern Mutual Aid Life Insurance Co. of Birmingham for fourteen years. R. P. McDavid, formerly insurance commissioner and secretary of State of Alabama, now of Louisville, Ky., will be associated with the new company.

Fort Smith Trust Co. of 508 Garrison avenue, Fort Smith, Ark., has been chartered, with capital stock of \$100,000, of which \$50,000 have been subscribed; O. E. Carnes, president; C. R. Green, vice-president; W. F. Blocker, secretary; J. K. Simmons, treasurer; P. K. Russell, C. E. Warner, Ed A. Thomas, John McGinty, N. Dyke and G. E. Otis, stockholders. The company will conduct savings bank, administer estates, care for property, etc.

#### New Securities.

Ocala, Ga.—The city has sold \$15,000 30-year 6 per cent. gold bonds to C. M. Ellingwood & Co. of Chicago, Ill., at a premium of \$550.

Keyser, W. Va.—Keyser Independent Education District will issue bonds to the amount of \$15,000. Charles A. Woodward is chairman.

Abbeville, S. C.—City has voted the issuance of \$20,000 bonds for sewerage purposes. The bonds will bear 5 per cent. interest and be payable in twenty years. J. L. McMillan is mayor.

Columbus, Ga.—Bids were opened August 8 for the \$250,000 of 4 per cent. water-works bonds recently voted. The bid of Sperry & Co. of Baltimore, Md., \$250,253, was the highest, and was accepted by city council.

Alexandria, La.—City will open bids

**MOTTU, DeWITT & CO.**  
**Southern Investments,**  
**NORFOLK, VA.**

Correspondence Invited.

## Beaumont Trust Co.

Beaumont, Texas.

BRANCH OFFICES:  
New York, 22 Fine St.,  
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J. H. BAILEY, Vice-President  
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JASON C. MOORE, Treasurer  
HORACE H. LANEY, Secretary  
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Does a General Trust Company, Fiduciary and Banking Business, and has special facilities, both here and abroad, for handling Railroad and all other Good Securities. Executes trusts of every description, and acts as fiscal agents and registrars for approved companies.

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Under a United States Law,

thus insuring respect and dignity throughout the world. No incorporation fee; no annual tax. Information furnished by

The District of Columbia Charter Co.

Columbian Bldg., Washington, D. C.

References by permission:

Central Natl. Bank, Natl. Capital Bank and James L. Norris, Patent Solicitor, Washington, D. C.

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Industries Located, Organized and Financed.

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**Southern Towns:** If your town wants industries and can offer some capital, free sites or other inducements we will give you practical assistance and advice in locating industries with you.

**Manufacturers:** If you desire a change of location where better facilities with some assistance will be given you we can place you advantageously. We have no interest to serve save yours. Write us your wants and needs.

Established 1835.

**The Merchants National Bank,**  
BALTIMORE, MD.

DOUGLAS H. THOMAS, President.  
WM. INGLE, Cash. J. C. WANDS, Asst. Cash.  
Capital, \$1,500,000.  
Surplus and Profits, \$593,000.  
Deposits, \$10,150,000.

Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

**The Exchange Bank,**  
MACON, GA.

J. W. CABANISS, Pres. C. M. ORR, Cash.  
W. H. BURDICK, Asst. Cash.  
Capital, \$500,000.00  
Surplus and Undivided Profits, 131,028.69  
Best facilities for making Collections at lowest rates. Correspondence invited.

**PALMETTO BANK & TRUST CO.**  
COLUMBIA, S. C.  
CAPITAL \$250,000.

GENERAL BANKING BUSINESS TRANSACTED.  
In the heart of the great cotton mill development of the South, our services are offered to investigate securities and enterprises. High class securities offered for sale.

#### FOR SALE.

State of Georgia Registered Bonds.

\$1000 4½%, due January, 1900; \$1000 4½%, due January, 1908; \$7000 4½%, due January, 1909; \$8000 4½%, due July, 1915; \$5000 3½%, due January, 1923; \$5000 3½%, due January, 1924.  
Price on application.

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Companies Organized Under Corporation Laws of Delaware.

The Laws furnish, at least expense, ample rights to stockholders, with minimum restriction upon corporate action. Charters perpetual, not subject to repeal by the Legislature. Copy of the Law, Blank Forms and Estimate of Expenses furnished by

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Government Bonds

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MEMBERS NEW YORK STOCK EXCHANGE

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## Wanted:

Texas & Pacific Coal Stock,  
Alabama Steel & Ship Bldg. 6s,  
Niagara Falls Power, 1st 5s,  
American Malting Co., 1st 6s,  
Detroit Citizens Ry. 5s, 1905,  
American Hawaiian S. S. 6s,  
Va-Carolina Chemical Bonds,  
Tennessee Coal & Iron, G. M. 5s,  
Hecker-Jones-Jewell Milling 6s,  
City of Savannah 5s, 1909.

## TOBEY & KIRK,

25 Broad St., New York.

Established 1873.

J. Wm. Middendorf, Pres. A. H. Rutherford, Treas.  
R. L. Williams, Vice-Pres.  
Howard P. Page, Sec. and Auditor.  
E. L. Bemis, General Manager,  
Office of Gen. Mgr., Richmond, Va.

## Railways & Light Co. of America,

EXECUTIVE OFFICES:

CONTINENTAL TRUST BUILDING,  
BALTIMORE, MD.

Finances, Builds, Purchases Electric Railways, Electric Lighting Properties, Waterworks, Ice Plants, Etc. Examinations made and reports furnished on all classes of industrial properties. CORRESPONDENCE SOLICITED.

## APPRAISAL & AUDIT CO. OF AMERICA.

Teutonic Bldg., CHICAGO.

Audits and Examinations of Books and Accounts. Deviser of Successful Accounting Systems. Appraisers of all classes of Property. Plans and Specifications of Buildings and Machinery. Send 10c. in stamps for book, "SYSTEM OF APPRAISAL & AUDIT."

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Electric Railways, Power Stations, Water Powers, etc., etc.

## WE BUY

Railway Charters and Franchises, ALSO Small Issues of Railway, Mining and Industrial Bonds.

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## The Mechanics Electric Co.

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170 Summer St., BOSTON, MASS.

## THE AUDIT COMPANY OF NEW YORK

EXAMINATIONS. APPRAISALS. AUDITS.

Investigations for Financing and Underwriting and for Reorganization Committees.

New York,

Mutual Life Buildings, 43 Cedar Street.

Chicago,

New York Life Building.

Philadelphia,  
Arcade Building.

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Write for "POINTERS on DELAWARE CORPORATIONS."

## DELAWARE TRUST COMPANY

9th and Market Sts.,  
WILMINGTON, DELAWARE.

HENRY W. THOMSON,  
Spartanburg, S. C.

## STOCK AND BOND BROKER,

Southern Cotton-Mill Stocks a Specialty.

CORRESPONDENCE SOLICITED.

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Electric Railway, Water Works, Light, Traction, Industrial and Mineral Properties and Securities Bought and Sold.

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#### SURETY BONDS.

## Fidelity and Deposit Co.

OF MARYLAND.

Home Office, - BALTIMORE, MD.

Assets Over \$5,000,000.

Pioneer Surety Co. of the South. Becomes Surety on Bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES.

HARRY NICODEMUS, EDWIN WARFIELD,  
Sec'y and Treas. President.

#### Guaranteed Storage Receipts Issued

For property stored on your own premises or in Public Warehouses. Also for Property stored in the warehouses of this Company.

All Receipts GUARANTEED by the FIDELITY & DEPOSIT CO. of Md.

A HIGH CLASS COLLATERAL—Accepted in all money markets.

**Baltimore Fidelity Warehouse Co.**

BALTIMORE, MARYLAND.

ALBERT G. OBER, President.  
T. E. WITTERS, Sec'y & Mgr.  
THOS. L. BERRY, Treasurer

AGENCIES:

Equitable Trust Company, Augusta, Ga.  
American Trust & Banking Co., Atlanta, Ga.  
Other agencies will be established where needed. Correspondence Solicited.



September 14 for sale of \$28,000 worth of street-paving bonds. These bonds will bear interest at 5 per cent., payable semi-annually, mature in forty years and be issued in denominations of \$1000. Address The Mayor.

Wilson, N. C.—This town will open bids on August 31 for water, sewerage and street improvement bonds to the amount of \$40,000. These bonds will be dated October 15, bear 5 per cent. interest and be payable semi-annually in New York city. Doane Herring, mayor, can be addressed for particulars.

#### Financial Notes.

The Tennessee Trust Co. of Memphis will purchase the \$250,000 issue of St. Francis levee bonds authorized at the last meeting of the Arkansas legislature.

The Consolidated Apartment-House Co. of Baltimore, Md., has given to the Central Trust Co. mortgages to secure \$100,000 first mortgage bonds and \$70,000 second mortgage bonds.

Messrs. Dennison, Prior & Co. of Cleveland, Ohio, have purchased \$20,000 worth of road improvement bonds issued by the township trustees, Martinsburg, W. Va. They were awarded the bonds at \$411 premium.

The city of San Antonio, Texas, has purchased \$22,000 worth of its outstanding bonds at par, with accrued interest up to August 7. This is reported to be the first time the city has been able to buy its bonds without paying a premium.

Committees representing the Germania National Bank and the Interstate Trust & Banking Co. of New Orleans, La., are negotiating with a view to merging the two companies. The combined assets of both institutions are about \$9,250,000.

State Treasurer Folk, as insurance commissioner ex-officio, Nashville, Tenn., has turned into the treasury \$33,943.90 semi-annual tax on premium receipts of insurance companies for the period ending June 30. The law requires that this tax be collected by the insurance department. This makes a total of \$85,468 that has been turned in for the six months. There remains uncollected only about \$2000, and this will be received in a few days. This will make a total of \$87,000, an increase of about \$7000 over the same period last year.

The mortgage of the Nashville Railway & Light Co. to the Guaranty Trust Co. of New York has been recorded at Nashville, Tenn. It secures money to fund the indebtedness and to improve the property of the company. The bonds are to be termed "first consolidated mortgage fifty-year 5 per cent. gold bonds." They are for \$1000 each, and the entire issue is not to exceed \$6,000,000. All the property, rights, franchises, etc., of the company are conveyed to the trustee to secure the loan. It is stipulated that an issue of \$2,432,000 shall, on the delivery of the mortgage, be certified by the trustee and delivered to the railway for its own use. These bonds will be sold from time to time as needs demand for paying debts and making improvements. The sum of \$2,577,000 of the bonds is to be delivered to the trust company, to be held to take up other bonds secured by mortgages, subject to the lien for which this instrument has been given. The remaining \$1,000,000 of the bonds is to be disposed of for each \$1,250,000 worth of improvements.

**SPRAGUE  
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Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Baltimore, \$9.35 from York, \$10 from Littlestown, and at proportionate rates from principal points. A stop-over will be allowed at Buffalo within limit of ticket returning.

The special trains of Pullman parlor cars and day coaches will be run with each excursion running through to Niagara Falls. An extra charge will be made for parlor-car seats.

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For descriptive pamphlet, time of connecting trains and further information apply to nearest ticket agent, or address Geo. W. Boyd, general passenger agent, Broad Street Station, Philadelphia. †

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## PROPOSALS.

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When the next regular issue of the Manufacturers' Record is too late for quick bids, the Daily Bulletin of the Manufacturers' Record will bring immediate results, as it is published every business day in the year, reaching many of the leading engineers, contractors, manufacturers and others, North, East, South and West.

W. D. Arthur, Secretary of the Carnegie Library Building Committee, Union, S. C., who inserted in these columns an advertisement for designs for the Carnegie Library to be erected in Union, says:

"The results of the advertisement were very satisfactory."

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., August 8, 1903.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 16th day of September, 1903, and then opened, for the low-pressure steam-heating apparatus, complete in place, for the United States Courthouse and Postoffice Building at Cumberland, Md., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Cumberland, Md., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., August 8, 1903.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 16th day of September, 1903, and then opened, for the installation of a conduit and electric wiring system for the United States Postoffice at Cumberland, Md., in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction, at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., August 10, 1903.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 24th day of September, 1903, and then opened, for the erection and completion of a Flying Cage for the U. S. Government at the Louisiana Purchase Exposition, St. Louis, Missouri, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Superintendent of Construction, St. Louis, Mo., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect.

**PROPOSALS** will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 12 o'clock noon, September 1, 1903, and publicly opened immediately thereafter, to furnish at the navy-yards, etc., Portsmouth, N. H.; Boston, Mass.; New York; League Island, Pa.; Washington, D. C.; Norfolk, Va., and Pensacola, Fla., a quantity of shackles, electric lamps, carbons, electrical supplies, bolts and nuts, rivets, brushes, limestone, clay, firebrick, broken stone, sand, asphalt, cement, cotton canvas, twine, oakum, dry goods, mats, hair, toilet fixtures, mattresses, glass, hardware, locks, pulleys, chain, steel balls, tools, leather, lumber, brass, copper, lead, iron, steel, steel castings and shapes, tin, zinc, manganese, ponchos, sheet rubber, gaskets, hose, packing, felt, polishing paste, tallow, paints, oils, turpentine, glycerin, acids, pipe and fittings, valves, water heaters, beans, rice, bacon, lard, macaroni, stationery, library books, stoves, jackknives, salt-water soap, beeswax, soap, installing wire mesh partition in equipment machine shop, Portsmouth, N. H., and connecting Fort Norfolk with Norfolk city water-works. Blank proposals will be furnished upon application to the navy pay offices, New York; Portsmouth, N. H.; Boston, Mass.; Philadelphia, Pa.; Norfolk, Va., and Pensacola, Fla. **H. T. B. HARRIS**, Paymaster General, U. S. N.

### Notice to Contractors.

For the furnishing of labor and materials for the erection of a new courthouse and jail in accordance with plans and specifications now on file in the probate judge's office at Dothan, Ala., and prepared by Andrew J. Bryan & Co., architects, of New Orleans, La., 1104 Hennen-Building and under their supervision, the Board of County Commissioners of Houston County, Alabama, will receive bids up to 12 o'clock noon, August 20, 1903, at which time the same will be opened. All bids must be addressed to the HON. GEORGE LESLIE, Probate Judge, and marked "COURTHOUSE PROPOSALS," the same must be in his hands on or before 12 o'clock of the above day, or they will not be received.

Each bidder must submit with his proposal for the courthouse a certified check in the amount of twenty-five hundred (\$2500) dollars, and also a certified check with his proposal for the jail in the amount of one thousand (\$1000) dollars, as a guarantee of good faith that he will, if his bid should be accepted,

make and execute a surety company bond satisfactory to the Board in the amount of the contract price for each building. In failure so to do in either case the check so submitted will be forfeited to the county as damage.

The two buildings will be constructed of such materials as are set forth in the plans and specifications. Concrete footing, hard-burned brick laid in cement in foundations; the exterior will be pressed brick and stone; the roof covered with slate and the floors to be fireproof construction; ceilings to be stamped steel. For the above work contractors are asked to submit propositions in three ways: First—To take full payment for the work in county warrants. Second—To take half payments in cash and half in county warrants. Third—To take payments in all cash. Bids will be received for any one of these three ways or more than one, but bids need not be made for more than one unless the bidder prefers to do so.

For information pertaining to the general financial conditions of the county, confer with Hon. George Leslie, Probate Judge. For information pertaining to plans and specifications, confer with the architects. All persons desiring to bid on the above work can secure plans and specifications upon application to the architects, together with proposal sheets.

The Board of County Commissioners reserves the right to accept any or reject all bids.

### NOTICE TO CONTRACTORS.

CHARLESTON, S. C., August 1, 1903.

The trustees of the James S. Gibbs Art Gallery, viz.: Judge Charles H. Simonton and Mayor J. Adger Smyth, invite sealed proposals for the erection and completion of an Art Gallery in the City of Charleston, S. C., agreeable to the plans and specifications now on file with J. H. Dingle, City Engineer, Charleston, S. C., and at the office of the Architect, Frank P. Milburn, Columbia, S. C. Each contractor will file with his bid a certified check on some well-known bank for the sum of \$2000, made payable to the trustees, as evidence that if his bid is accepted he will enter into contract at once, and give an acceptable Guarantee Company's bond in the sum of \$25,000 for the faithful performance of the contract.

Should the successful contractor fail to file the bond required within twenty days, his check will be forfeited as liquidated damages by reason of the delay.

For more detailed information see plans and specifications.

Bids must be filed with Architect FRANK P. MILBURN, Columbia, S. C., on or before August 29th, 1903.

The trustees reserve the right to reject any or all bids.

### Notice to Bridge and Stone Contractors.

**SEALED PROPOSALS** will be received by the County Court of Wetzel County, W. Va., at New Martinsville, W. Va., until Monday, August 24, 1903, at 3 o'clock P. M., for the construction of steel bridge across South Fork, at Jacksonburg, on line of West Virginia Short Line Railroad, according to plans on file in the office of the clerk of said court. Length 150 feet, width 16 feet. Also bids will be received at same time and place for the stone abutments for said bridge, and also for stone abutments for bridge at Smithfield. Court reserves right to reject any or all bids. **I. D. MORGAN**, Clerk.

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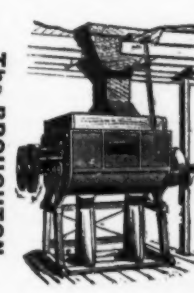


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36" gauge Locomotives.  
Four H. K. Porter 9"x14", saddle tank.  
Two Vulcan 9"x14", saddle tank, built 1900.

### RAILS.

200 tons 30-lb. steel relayers.  
200 tons 35-lb. steel relayers.  
500 tons 56-lb. steel relayers.

### CARS.

Eighty 80,000-lb. Ore Hopper Cars, made by Allison Mfg. Co.

### PUMP.

1 Worthington Compound Duplex Condensing Pump, 25"x43"x17 1/2"x36", 20" suction and 18" discharge. Capacity, 3,000,000 gallons.  
All of the above in A-1 order and ready for immediate delivery.

We buy and sell Air Compressors, Engines, Locomotives, Rails, Cars, Bridges, Boilers, Hoisting Engines and Pumps, etc. Complete plants purchased.

### Steam Street Motor Car.

Baldwin standard gauge, compound cylinders, only four years old, weight 60,000 pounds. Cost new, \$5900. For quick acceptance will be sold at a great bargain, subject prior sale and inspection.

### BOILER STACK.

1000 feet of 34" Boiler Stack, 5-16" material. This stack is first-class in every respect and will be sold at a bargain.

### CYLINDER BOILERS.

8 Boilers, 40" long x 34" diam., good for 100 lbs. steam pressure, without fixtures or fittings. For quick sale will be sold cheap.

**A. V. KAISER & CO.**

222 South Third St., PHILADELPHIA, PA.

### ENGINES.

One 18x42 Harris-Corliss Engine.  
One 16x20 S. C. Washington Iron Works' Engine self-contained.  
One 13x23 S. C. Cardwell Engine.  
One 11x18 C. C. Talbot Engine, Box-bed.  
One 14x16 S. C. Engine.  
One 11x15 Richmond Locomotive Works' S. C.  
One 11x14 A. & C. C. Engine.  
One 7x8 Vertical Engine.  
One 6 H. P. Vertical Engine.  
One 4 H. P. Vertical Engine.  
One 20 H. P. Farquhar Traction Engine.  
One 15 H. P. Aultman & Taylor Traction Engine.  
One 12 H. P. Birdsall Traction Engine.  
One 10 H. P. Frick Engine and Boiler mounted on wheels.

### BOILERS.

One 80 H. P. High-Pressure R. T. Boiler, good for 120 lbs. steam working pressure.  
One 80 H. P. R. T. Boiler.  
One 70 H. P. R. T. Boiler.  
One 60 H. P. R. T. Boiler, Half-Front.  
One 50 H. P. R. T. Boiler, Full-Front.  
One 50 H. P. Economic Boiler.  
One 40 H. P. Economic Boiler.  
One 40 H. P. R. T. Boiler, Half-Front.  
One 25 H. P. R. T. Boiler, Half-Front.  
One 20 H. P. R. T. Boiler, Half-Front.  
One 15 H. P. Locomotive Type Boiler on wheels.  
One 30 H. P. Vertical, and several smaller sizes.  
Also several sizes of pumps and other machinery.  
The above are in A-1 condition. Write for particulars.

**Jno. A. Waters & Co.,** Richmond, Va.

## FOR SALE.

Fifty Whitin Welman Top Flat Cards, with 40 tops 40 ins. wide. Cylinder 42 x40 ins. Doffer 40x18 ins. Floor space 8 ft. 2 ins. x5 ft. 2 ins., with collers. Production 125 lbs. per day. Some of these cards are only 3 years old, balance 8 years. They can be seen running. Also 150 sets Steel Clothing in extra good condition; 100 Doffers; 150 Mason Looms, 44"; 10 Ashworth Revolving Top Cards. For full information and price apply to

**WM. J. DUNN,**

Fall River, Mass.

### FOR SALE.

\$75,000 worth of New Leather Belting, somewhat stock-worn, but for all practical purposes as good as ever, running in sizes from 1 inch wide to 24 inch wide, single and double. Will sell this belting at second-hand prices in lots to suit buyers, and it can now be inspected in our warehouses.

**L. F. SEYFERT'S SONS,**

437-439 N. Third Street, PHILADELPHIA.

### FOR SALE.

Two Pairs 16x20 Link Motion Engines.

Can be used for Hoisting Purposes.

**CHAS. T. LEHMAN,**

BIRMINGHAM, ALA.

## FOR SALE.

The following second-hand cloth machinery, in first-class condition, now in our mill at Petersburg, Va., which we have recently bought and are converting into a spinning mill exclusively, and we wish the room occupied by this machinery for other purposes. Most of this machinery is practically as good as new, and can be bought at a bargain, either the whole lot or in lots to suit:

102 40" looms, Whitin and Lowell make, set up to make 36" 56x60 4-yard goods, all complete, including belts, reeds, harness, shuttles and beams.  
25 40" looms same as above, except stripped of harness.

### SUPPLIES.

#### Reeds.

163 30 dents per inch, 43" long.  
151 29 1/2 dents per inch, 42 1/2" long.  
2 28 1/2 dents per inch, 44 1/2" long.  
2 27 1/2 dents per inch, 37 1/2" long.  
4 28 1/2 dents per inch, 39 1/2" long.  
1 28 1/2 dents per inch, 38 1/2" long.  
53 44 dents per inch, 44" long, same as looms are now equipped with.  
1 38 1/2 dents per inch, 38 1/2" long.  
5 39 1/2 dents per inch, 39 1/2" long.

#### Loom Supplies.

31 strap hooks.  
28 rolls 2" belting, 17 feet to roll.  
2 rolls 1 1/2" belting, 17 feet to roll.  
33 picker sticks.  
45 new Litchfield shuttles.  
90 second-hand shuttles.  
43 wooden crank bars for Lowell looms.  
52 lug straps.  
52 rawhide picker loops.  
50 striped canvas picker loops.  
92 crankshaft box bolts, 1 1/2"x1 1/2", for Whitin looms.  
118 bolts for parallel springs, 4"x3", for Whitin or Lowell looms.  
24 jack hooks.  
10 shuttle springs.  
100 loom beams for 40" looms.  
30 sets second-hand harness.  
105 new loom cranks—32 for Lowell, 73 for Whitin.

#### Slasher.

1 Lowell slasher 57" face, double copper cylinders 7 feet and 5 feet diameters.  
1 copper size vat 57"x39".

#### Warpers.

2 Hopedale warpers with creels for 480 ends each.  
12 warper beams 54" between heads.

#### Finishing Machinery.

1 Curtis & Marble shearing and brushing machine.  
1 Elliott cloth folder.  
1 Bushnell cloth press.  
1 Dinsmore sewing machine.

Address

**CHESTERFIELD MFG. CO.,**

Kinston, N. C.

## Machinery Bargains.

### Second-Hand—Good Condition.

Vertical Boilers to 40 H. P., Hor. Tub. Boilers to 90 H. P., Locomotive Boilers 20, 60, 100 H. P., Westinghouse Engine 28 H. P., Chandler & Taylor auto. high speed 8x10, Hor. plain slide valve engine to 25 H. P., Steam pumps all sizes, lot large valves.

Wood Mortisers, Boring machines, Gray & Wood planers, 26x6 and 26x12 double surfacers, Swing Saw, Jig Saw, Variety Moulder, 16" Fox Lathe, 16" Spinning Lathe, 5 speed lathes, 10" Sc. Cutting Lathe, 8" Boynton Shaper.

### NEW MACHINERY.

10" to 26" Screw Cutting Lathes, 20" to 28" Drill Presses, Power Hack Saws, Emery Grinders, Buffalo Forges, 2 1/2, 5, 7 1/2 H. P. Gas Engines, 3 to 15 H. P. Vertical Engines, 12 to 30 H. P. Auto. High Speed Engines.

Shafting, Hangers, Pulleys, Belting, etc. Pipes, Valves, Fittings, the largest stock in the South. Write what you want or have to sell.

**J. D. MALLORY,**  
BALTIMORE, MD.

## FOR SALE.

1 45-ton Vulcan Steam Shovel, standard gauge, in good condition, ready for immediate delivery.

5 Standard Gauge American Type Locomotives.

Cars, Rails and Contractors' plant of every description.

If you want to buy or sell contractors' plant, we can help you.

Correspondence solicited.

**CONTRACTORS EQUIPMENT CO.**

1124 Betz Bldg., Philadelphia, Pa.

## FOR SALE.

1 18x42" Left Hand Harris Corliss Engine. Thoroughly Repaired. GUARANTEED good as new.

**CLYDE MACHINE WORKS,**  
39th St. and Union Ave. CHICAGO, ILL.

## LATHES.

No. 73 14"x5' Lodge & Shipley.

No. 78 14"x5' Lodge & Shipley.

No. 40 20"x10' Taper, Lodge & Shipley.

No. 47 20"x8' Lodge & Shipley.

### THE LODGE & SHIPLEY MACHINE TOOL CO.

CINCINNATI, OHIO,

U. S. A.

### Machinery Bargains.

4 Upright Mortisers.  
1 42" 3-drum Columbia Sander.  
1 No. 1 Self-feed Rip Saw.  
1 Smith Combination Saw Table.  
1 Smith Tenoner.  
1 Williamsport Tenoner.  
1 Fay & Co. Tenoner.  
1 each 8, 12, 16, 20, 30 Hand Jointer.  
1 26" Endless Bed Double Surfer.  
4 24" Single Surfers.  
1 24" Single Surfer and Matcher.  
1 each 30, 36, 42, 48" Band Saw.  
1 each 7" 4-side, 8" 4-side, 9" 4-side, 10" 4-side,  
4" 3-side, 6" 1-side Stickers.  
1 Double Deck Saw Mill.  
2 Veneer Presses.  
Large line second-hand Engines, Boilers, Belting,  
Pulleys, Hangers, etc.

Cleveland Belting & Machinery Co., Cleveland, O.

## FANS.

Central station man's opportunity to increase the day load. We offer for immediate delivery, all f. o. b. Cincinnati, the following 125 cycle fans:

150 G. E. swivel and trun., 12 in., 104 volt., \$5.00 each.  
150 Emerson solid, 12 in., 52 volt., \$3 each.  
200 Westinghouse solid, 13 in., 52 volt., \$3.50 each.  
100 G. E. swivel and trun., 12 in., 52 volt., \$4.00 each.

JOHN A. STEWART ELECTRIC CO.  
430 Sycamore St., Cincinnati, Ohio.

### FOR SALE.

## Davis Calyx Drill,

Class F, with appurtenances and 10 H. P. locomotive type boiler on wheels, to run drill.

This drill has a capacity of 600 feet, and bores a 4" hole, 3" core. 306 feet of drill rods with drill. Also, 181 feet of 5" extra black pipe for casing, with drive head and shoe. Has been in use about ten months, with best of care. This drill is used for exploiting for minerals, and for driven wells.

R. L. MURRAY, Waynesville, N. C.

### FOR SALE.

One 18x24 Pittsburg Locomotive. Six Drivers. Weight 43 tons. Condition good. Price \$3500.00. Immediate shipment.

W. F. DAVIS,  
Birmingham, Ala.

### FOR SALE.

12 Western Wheeled Scrapers.  
10 Drag Scrapers.  
4 Western Railroad Plows.  
2 Rooter Plows.  
1 two and one-half ton Ames Disc Roller.

WILLIAM HANLEY, Contractor, Bradford, Pa.

## BOILERS—Second Hand,

### FOR SALE.

1 50 H. P. horizontal.  
1 60 H. P. horizontal.  
1 70 H. P. vertical.  
6 steam pumps, new. All good condition.

E. J. CODD CO., Baltimore, Md.

## BARGAINS—CHEAP.

One Deane Duplex Comp. Pump, 14x26x11x18.  
One 30x13 Blake Pattern Crusher, nearly new.  
Three Hoisting Engines. Rails, Locomotives.

L. E. KENNEDY & CO.  
17 Broadway, New York City.

### FOR SALE.

## Partial List Second-Hand Machines

13"x5' Pratt & Whitney, rise and fall rest, with taper.  
14"x54' Putnam, rise and fall rest.  
14"x5' Prentiss, rise and fall rest.  
14"x5' Blaisdell, rise and fall rest, with taper.  
15"x5' Poeter, rise and fall rest.  
15"x5' Prentiss, rise and fall rest, with taper.  
16"x5' Pratt & Whitney, rise and fall rest, with taper.  
16"x7' M. B. & O., plain rest.  
16"x10' Fay & Scott, compound rest.  
18"x5' Reed, plain.  
18"x5' Lodge & Davis, compound rest and taper.  
24"x10' No Name, incomplete.  
26"x5' Betts Lathe, compound rest.  
30"x5' Stark, plain.  
36"x14' Betts Lathe, compound rest.  
No. 2 B. & O. Turret.  
No. 14 Garvin Special Forming Turret Lathe.  
14"x6' Lodge & Barker Turret Lathe.  
16"x6' Johnson Turret Lathe.  
18"x6' Lodge & Davis Chucking Lathe.  
Six-Spindle Miles, Bement & Co. Arch Bar Drill.  
26" Bickford Upright Drill.  
20" Barnes Upright Drill.  
Three-Spindle Upright Slat Sensitive Drill.  
Three-Spindle Garvin Sensitive Drill.  
24"x24"x6' Sellers Planer, one head.  
42"x42"x10' Whitcomb Planer, two heads.  
42"x42"x18' Betts Planer, one head.  
16" Smith & Mills Shaper.  
No. 2 Keyseat Milling Machine.  
No. 2 Garvin Plain Milling Machine.  
No. 1 B. & S. Universal Milling Machine.  
No. 4 1/2 Garvin Plain Miller.  
No. 3 Garvin Plain Miller.  
1 No. 4 1/2 Brainard Plain Miller.  
No. 4 Schlenkers Double-Head Bolt Cutter.  
2" Pratt & Whitney Cutting-Off Machine.  
12" Lowell Machine Co.'s Slotter.  
Double-Head Pratt & Whitney Horizontal Boring Mill.  
Cold Saw, 18" Blade, Pump and Pan.  
30" Springfield Knife Grinder.  
Wells Bros. Cutter and Reamer Grinder.  
Springfield Tool Grinder, 36" Wheel, with pump.  
2 Speed Lathes.  
1 35 H. P. Portable Boilers.  
1 Blacksmith Bellows.  
Also a complete line of new machines. Correspondence solicited.

Brown & Zortman Machinery Co.,  
Pittsburg, Pa.

### 2ND-HAND TOOLS.

**Lathes.**  
16 in. x 6 ft. Porter.  
18 in. x 8 ft. Fifield.  
18 in. x 8 ft. Lodge-Davis.  
20 in. x 4 ft. New Haven.  
27 x 11 Geo. Pierce heavy.  
29 x 12 ft. Fay & Scott.  
26 Stewart Speed Lathes.  
**Planers.**  
24 in. x 4 ft. heavy, Leeds.  
6 x 3 Flat, r.  
36 x 8 Wheeler.  
**Shapers.**  
12 in. Gould.  
16 in. Geared Western.  
18 in. Ohio, crank.  
**Drills.**  
Ceiling, 3 ft. arm, Radial.  
Ceiling, Boltmakers.  
40 in. Prentice Bros.  
**Screw Mch.**  
No. 60 Garvin, 1/2 in., with wire feed.  
Auto. Spencer, 3/4 in.  
Auto. B. & S., 1/2 in.  
Garvin Hub Mch., 4 1/2 in. hole.  
**Grinders.**  
No. 2 Surface, Universal Co.'s.  
No. 3 B. & S. Cutter and Tool.  
**Wood Working.**  
No. 1 Greenlee, Auto. R. B. Cut-off Saw.  
16 in. Goodell & Waters Planer, 1 1/2 in.  
Prybitt Planer and Joiner.  
E. heavy 1/2 side Timber Planer and seven other machines.  
**Miscellaneous.**  
Sq. Arbor Gage Fox Lathe.  
5" lb. Bliss Drop Hammer.  
5" lb. Merrill Drop.  
Oil Separator, American.  
No. 1 B. & S. Univ. Miller.  
No. 4 1/2 Brainard Plain Miller.  
No. 2 P. & W. Screw Slotter.  
100 Ton Sellers Hyd. Wheel Press.  
13 in. Bement Slotter.  
No. 1 Stiles and No. 19 Bliss Presses.  
18 H. P. N. Y. Safety Engine, etc., etc., etc.

Write your requirements.

G. L. BENNETT, 113 Liberty St., New York.

## FOR SALE.

### Immediate Delivery.

One Westinghouse Standard Engine, 11x11 Est. H. P. 60.  
One Westinghouse Standard Engine, 11x10 Est. H. P. 60.  
One Slide Valve Engine, 10x12, Est. H. P. 30.  
Two Return Tubular Boilers, each 66"x18", Est. H. P. 80 each.  
Two Smith-Valle Single Hydraulic Pumps, 12x1 1/2 x14.  
The above machinery is in good order and was in operation up to April 30th, when it was taken out on account of enlargement and changes in our steam plant and other machinery equipment.

Address  
NORTH CAROLINA COTTON OIL CO.  
CHARLOTTE, N. C.

### FOR SALE.

2 1/2 horsepower Fairbanks, cost \$185.00...\$90.00  
8 horsepower Fairbanks.....\$250.00  
25 horsepower Fairbanks.....\$550.00  
6 horsepower Otto.....\$250.00  
10 horsepower Otto.....\$275.00  
35 horsepower Otto.....\$600.00  
15 horsepower Lambert.....\$375.00  
60 horsepower New Era.....\$800.00  
68 horsepower Pons, cost \$2000.00...\$950.00  
Guaranteed to be in perfect working order.  
New Backus gas and gasoline engines, positively the best engine built at reasonable prices and on long time. I buy, sell or exchange gas and gasoline engines.

J. M. JOHNSTON, CHICAGO ILL.

### WANTED TO PURCHASE.

One 8 1/2 in. by 10 in. double cylinders and double drum hoisting engine without boiler.

Address,  
P. O. BOX 798,  
New Orleans, La.

## For Sale—Machinery.

Hoisting engines, pile drivers, steam dredges, steam shovels, locomotives, dump cars, flat cars, relaying rail, engines, boilers, pumps, air compressors, rock drills, channelers, stone crushers, concrete mixers, road rollers, grading and ditching machines, wheel scrapers, traveling derricks, cableways, wire cable, etc. Send for list of bargains in machinery just issued.

WILLIS SHAW,  
710 New York Life Building, Chicago.

### Engine Lathes.

New and Rebuilt.

32"x15' 28"x14' 22"x14'  
22"x8 1/2' 20"x10' 20"x9'  
19"x8' 18"x10' 18"x8'  
3-18"x6' 16"x9' 16"x6'  
16"x5' 14"x6'

### Plain Horizontal Engines.

Suitable for Brickyards or other purposes.

20"x30" R. H. 16"x24" L. H.  
15"x24" L. H. 12 1/2"x24" R. H.  
12"x24" L. H. 12"x20" R. H.  
10"x24" L. H. 10"x14" R. H.  
Automatic Engines, 20 to 2 H. P.

Lathes, Planers, Shapers, Drills.

Carlin Machinery Supply Co.

Lacock and Sandusky Sts.  
ALLEGHENY, PA.

### BARGAINS FOR QUICK DELIVERY.

No. 2 Gates Crusher.  
No. 3 Gates Crusher.  
No. 5 Style B, Gates Crusher.  
Double column Drop Hammer, cylinder 14"x36", fine order.  
Good Second-Hand Engines.  
12-ton Kelly Roller, fine as new.  
New Well Drilling Machine, cheap.  
Marion AA Shovel, fine condition.

WE SELL  
Engines, Boilers,  
Pumps and Quarry  
Supplies,  
Concrete Mixers,  
Horse Rollers,  
Steam Drills,  
Air Compressors,  
Belting, Hose,  
and a full line of  
Contractors' Supplies.

CONTRACTORS' SUPPLY & EQUIPMENT CO., 232 Fifth Avenue, CHICAGO.

## GAS ENGINE.

We have for sale an 80 H. P. Standard two cylinder Engine, specially designed for Electric Light use.  
Engine is practically new and price very low.

THE F. BISSELL CO., 150 Huron St., Toledo, Ohio.

### For Sale—Delivery Jan. 1, 1904.

Two Friction Rope Haulage Machines, 300 and 250 H. P. respectively.  
Four miles, one inch, seven strand wire rope.  
One 600 light, G. E. Generator and Switchboard.  
One 75 H. P. Harrisburg Engine, all complete.  
200 ft. 10 in. wrought iron pipe.  
This machinery all in splendid condition and has only been in use about two years. Reason for selling, not large enough to handle tonnage, and are replacing with heavier.  
For further information apply

COLLINS COLLIERY CO.  
Glen Jean, W. Va.

### FOR SALE.

1 300 H. P. Cross compound Slater engine, \$3000.  
1 18x42 Harris Corliss, overhauled, \$1200. 1 12x36 Corliss, overhauled, \$750. 1 12x18 Skinner engine, \$300. 1 34x72 George Corliss, with balance wheel, \$5.00 per H. P. 1 30x72 George Corliss, with balance wheel, \$6.00 per H. P. 1 24x48 Woodruff & Beach, automatic, \$500. 1 20x50 George Corliss engine, \$1200. 1 10x24 Ryder, automatic, \$150. 1 6x8 Fitchburg, vertical, \$85. 1 iron stack, 52x36, \$150. 1 Corliss, segment wheel 16x60" face. 1 hydraulic press, 8" rams, 48x36" platens. 1 300 to 400 H. P. quill, practically new, including boxes. 2 tanks, 9" diameter, 8" deep, 3/4 shell, \$85 each. 1 400 H. P. Berryman heater, \$150. 1 100 H. P. Berryman heater, \$75. 1 75 H. P. National heater, \$50. 1 75 H. P. National heater, \$50. Lot of pulleys, 6" to 16" diameter. 1 400 H. P. Knowles jet condenser, \$350. 1 250 H. P. Deane condenser, \$200. 5 72"x18" H. R. T. boilers, first-class condition, without fittings, \$200 each.  
F. H. DAVIS & CO., 53 State St., Boston, Mass.

## Baker, Stillwell & Hart

Manufacturers' Agents,

Room 421 Chalfoux Building,  
BIRMINGHAM, ALABAMA.

Pig Iron, Rails, Fire Brick,  
Bar Iron, Nuts and Washers, Babbitt Metal  
Coal, Bolts, Tool Steel,  
Coke, Nails, Engines,  
Steel Shapes, Foundry Supplies, Boilers,  
Cars, Car Wheels, Castings,  
Second-hand Machinery of all kinds.

### FOR SALE.

## Door, Sash & Blind Machinery.

1 E. B. Hayes Machine Co. Door Sticker. 1 E. B. Hayes Machine Co. Sash Rail and Stile Sticker. 1 E. B. Hayes Machine Co. Sash Bar Sticker. 1 Greenlee Bros. & Co. Sash and Blind Relisher and Mortiser, without Blind Routing Attachment. 1 H. B. Smith Machine Co. Improved Sash Clamp. 1 Diagonal Planer.

CYPRESS LUMBER CO.  
Apalachicola, Fla.

## 150 Horse Power Boiler, Upright Tubular.

In fine condition. Too small for our use. Must dispose of it quickly. Need the room.

APPLY AT

THE WM. POWELL CO.

2525 Spring Grove Avenue,

Cincinnati, Ohio.

### FOR SALE.

1 22x52 R. H. Watts Campbell Corliss Engine.  
1 10x12 Ideal Automatic Engine.  
1 10x7x10 Worthington Duplex Pump.  
1 15 ton Road Roller for sale or rent.  
1 Little Giant Steam Shovel.  
1 10x7x10 Worthington Duplex Pump.  
Iron Tanks, 300 to 1000 gallon capacity.

JAS. S. BRADEN, 26 Cortlandt St., New York.

### FOR SALE CHEAP.

Several Dynamos, Motors, Engines, Boilers, Pumps, Steam Traps, Damper Regulators, Iron Pulleys, Shafting, Etc. Practically good as new. Get our figures before buying elsewhere. We can beat 'em all on prices.

American Electric Supply & Mfg. Co.  
37 Thames St., New York City.



# OUR BARGAIN PAGE.

Merchants, after going through our hustling, bustling institution, invariably tell us of their astonishment at the enormous amount of material we have in stock, and of the fact that they never realized the extent of the enterprise conducted by the CHICAGO HOUSE WRECKING COMPANY.

We are BUYERS of ANYTHING MANUFACTURED. It would doubtless surprise you to know we have for sale, for instance, China Ware, Books, Cash Registers, Furniture, Pianos, Lumber, Stoves, etc., etc., etc.

*No matter what your business may be, we have something for you.*

## STEEL BUILDINGS.

If you are interested in the purchase of a steel structure, will be glad to have you advise us of your requirements. We are in position at this time to furnish the necessary material to construct several buildings. We can furnish you drawings and information on application.

## RELAYING RAILS.

We have in stock over 20 cars of light new and relaying rails, 8, 12, 16, 20 and 25-pound. For immediate shipments can quote extremely low prices.

## STRUCTURAL MATERIAL.

In connection with our purchase of the Pan-American Exposition and of other large buildings, we are always in position to make prompt shipment on structural iron and steel of every kind. We issue a stock-list from time to time, which we mail on application.

## STEEL TANKS.

Over 100 storage and pressure tanks for sale at low prices. See list in last week's issue.

## PIPE.

Our stock of good standard black second-hand pipe, with guaranteed threads and couplings, as follows:

120,000 ft. 1 inch, per foot.... 3 3/4 cts.  
40,000 ft. 2 inch, per foot.... 7 1/4 cts.  
140,000 ft. 2 1/2 inch, per foot.... 10 cts.  
40,000 ft. 1 inch, EXTRA HEAVY, per foot, 4 cts.  
50,000 ft. 1 1/4 inch, EXTRA HEAVY, per foot, 5 1/4 cts.  
800 ft. 8 inch, with flanges, per foot... \$ .70.  
400 ft. 10 inch, with flanges, per foot... 1.10.  
1800 ft. 12 inch, with flanges, per foot... 1.45.  
1400 ft. 14 inch, with flanges, per foot... 1.75.  
600 ft. 16 inch, with flanges, per foot... 2.00.  
200 ft. 18 inch, with flanges, per foot... 2.25.

## WROUGHT-IRON CASING.

Second-hand, THREADED ENDS AND SCREWED COUPLINGS:

3 1/2 inch, per foot, 9 cts.  
4 inch, per foot, 13 cts.  
Fitted with EXPANDED CAST-IRON FLANGES AND BOLTS:  
2 1/2 inch, per foot, 4 1/2 cts.  
3 1/2 inch, per foot, 10 cts.  
4 inch, per foot, 13 cts.  
10,000 ft. 3 inch GALVANIZED SPIRAL RIVETED, per foot, 7 cts.

## CURVED PIPE.

We have in stock two carloads of heavy standard black pipe fitted with cast-iron riveted flanges, which is curved from 1/4 to 1/2; sizes 8, 10, 12 and 14 inch. It is in good condition, and will be sold at low prices.

## FIRE-ESCAPES.

10 sections of fire-escapes with platforms complete. Sketch on application.

## DUMP CARS.

40 dump cars, 24 and 36 gauge. Price each, \$20.

## WIRE ROPE.

The following wire rope, second-hand, in good condition, for prompt acceptance:

3000 ft. 3/4 inch, per foot.... 4 1/2 cts.  
2700 ft. 1/2 inch, per foot.... 7 cts.  
1000 ft. 1 inch, per foot.... 9 cts.  
1200 ft. 1 1/4 inch, per foot.... 10 cts.  
1400 ft. 1 1/2 inch, per foot.... 11 cts.

## MANILA ROPE.

Second-hand, in good condition, from 3/4 to 2 inch. Per pound, 7 cts.

## NEW SISAL ROPE.

3/4 to 1 1/4 inch. Per pound, 8 cts.

## STEEL SLEDGES.

Purchased carload of them at Manufacturers' Sale. They are brand new. Our stock consists of the following:

STONE SLEDGES from 6 to 27 lbs.

STRIKING SLEDGES, 5 to 22 lbs.

BLACKSMITHS' SLEDGES, STRAIGHT PEIN, 5 to 26 lbs.

BLACKSMITHS' SLEDGES, CROSS PEIN, 6 to 16 lbs.

BLACKSMITHS' SLEDGES, DOUBLE FACE, 5 to 18 lbs.

TURNING SLEDGES, 6 to 10 lbs.

SPALLING HAMMERS, 8 to 21 lbs.

STRIKING HAMMERS, 2 to 4 1/2 lbs.

PRICE PER POUND, 5 cts. Send us sample order.

## BOLTS.

A carload of brand new round and square head bolts, mixed, all sizes. They range up to 24 inches in length and from 3-16 to 3/4 inch diameters. Price in lots, per pound, 2 1/4 cts.

## SHOVELS.

300 dozen "second" quality solid and hollow backs, long and "D" handle. Per dozen, \$3.10.

## REGISTERS.

Brand new black japanned registers and ventilators.

## CIRCLE TOP:

300 7x10, each 18 cts.

200 10x14, each 35 cts.

200 11x13, each 60 cts.

SQUARE REGISTERS:

225 9x9, each 20 cts.

125 14x13, each \$1.

125 7x7, each 20 cts.

120 6x8, each 20 cts.

Also faces, borders, etc.

## TELEPHONE EQUIPMENT.

A large number of long-distance good second-hand 'phones, rebuilt and in first-class condition. For \$17.50 we will supply you with 2 of our high-grade 'phones, complete with batteries and all necessary equipment to erect a line 2 miles in length. Full directions will accompany shipment, so that anybody can install the line.

Also switchboards and equipment of every kind.

## INCANDESCENT LAMPS.

We are still offering absolutely brand new lamps; voltages from 100 to 115; candle-powers 8 to 25.

Edison base, each 9 1/2 cts.

T. H. base, each 10 1/4 cts.

## FIRE HOSE.

40,000 feet 2 1/2-inch cotton rubber-lined guaranteed hose, with couplings. Price per 50-foot length, \$15. Many other kinds of hose for sale. Advise us your needs.

## SHAFTING.

Several cars of second-hand straight steel shafting, ranging from 1/2 to 4 1/2 inch. Our price will mean a considerable saving to you.

Also hangers, couplings, boxes, collars, etc.

## IRON PULLEYS.

We are offering sizes from 6 to 42 inch diameter, any face, at a discount of 75 per cent. from standard list. Our second-hand pulleys are in first-class shape, and just as good as new.

## WOOD-SPLIT PULLEYS.

A large quantity of large-size wood-split pulleys, ranging from 36 to 96 inch diameter, in all faces, which we offer at 82 1/2 per cent. off the list, subject to immediate acceptance. Send us your order.

## LEATHER BELTING.

Still on hand a quantity of extra high-grade rebuilt second-hand leather belting, which we guarantee to give satisfaction, or can be returned at our expense.

6 inch double, per foot.... \$ .56  
8 inch double, per foot.... .80  
10 inch double, per foot.... .90  
12 inch double, per foot.... 1.00  
16 inch double, per foot.... 2.75

## LACE LEATHER.

We have in stock quite a quantity of new rawhide cut lace leather. 5-16 inch, price per 100-foot package, 40 cts.

## ANVILS.

A great many anvils in stock, new ones, ranging in weights from 100 to 200 lbs., which we are selling in cast iron, per pound, 5 cts., and wrought iron, per pound, 6 1/2 cts.

## PLUMBING MATERIAL.

We carry a complete stock of brand new plumbing material, which we can furnish you complete in every way. Can sell you a water-closet combination with all necessary equipment above floor for \$9, a bathtub for \$15.

Sinks for \$1 each.

Lavatories at \$6.50 each.

## RADIATION.

Now is the time to figure on the necessary equipment for heating your plant this coming winter. You can buy this class of material cheaper than you will be able to a little later on. For instance, we can furnish you first-class second-hand factory radiation at 15 cts. per foot. Radiator valves at 70 cts. and fittings at correspondingly low prices. Also several low-duty boilers for sale at low prices.

## CHECK VALVES.

150 dozen 1/2 inch brand new brass horizontal check valves. Price per dozen, \$1.50. Valves of every kind at sacrifice prices.

## TWINE AND CORD.

Two carloads of new, shopworn material. State your requirements and we will mail you samples and quote you right prices.

## STEEL ROOFING AND SIDING.

A large quantity of No. 20 and No. 22 gauge second-hand corrugated sheets painted black two sides, free from nail holes. Price per square, \$2.45.

Also a quantity, same as above, with occasional nail holes, suitable for siding. Price per square, \$2.10.

1000 squares of No. 28 galvanized corrugated full size new roofing. Per square, \$3.65.

300 squares IMITATION BRICK PRESSED STEEL SIDING. Per square, \$2.40.

800 squares of PRESSED STEEL CEILING. Per square, \$3.40.

## PREPARED FELT ROOFING.

2-ply "Eagle" brand felt. Per roll, \$1.15.

3-ply "Eagle" brand felt. Per roll, \$1.35.

VULCANITE asphalt roofing. Per roll, \$1.50.

Other grades also.

## GALVANIZED SHEETS.

A carload of new galvanized sheets, miscellaneous sizes, gauges 18 to 22. Per pound, 3 cents.

## BLACK SHEETS.

Four carloads of miscellaneous size black sheets from 16 to 24 gauge.

## HORSESHOES.

Our stock of new perfect horseshoes ranges in size from 0 to 8 fronts and hinds, in all shapes and weights, steel and iron. PRICE PER TON, \$52.

300 kegs MULE SHOES, Nos. 4 and 5.

Price per ton, \$42.

HORSESHOE NAILS, sizes 5 to 9. Price per pound, 7 1/2 cents.

## REFRIGERATING MACHINERY.

1 15-ton ice, 30-ton refrigeration.

1 10-ton ice, 20-ton refrigeration.

1 5-ton ice, 10-ton Barber refrigerating machine.

4 small belt-driven refrigerating machines.

## BOILERS.

Our stock of boilers is the largest we have found anywhere on earth. We list a few as follows:

60x18 triple butt strap riveted, 150 lbs. pressure.

3 250 H. P. Helne.

1 250 H. P. Campbell & Zell.

1 125 H. P. locomotive fire box.

1 100 H. P. locomotive fire box.

1 70 H. P. locomotive fire box.

3 50 H. P. locomotive fire box.

1 50 H. P. Erie City Economizer.

1 40 H. P. Erie City Economizer.

3 40 H. P. fire box.

2 30 H. P. fire box.

1 25 H. P. Erie City Economizer.

3 25 H. P. locomotive fire box.

3 20 H. P. fire box.

2 15 H. P. fire box.

1 54x7 1/2 vertical.

1 60x10 tubular submerged type, vertical.

1 54x10 vertical tubular.

1 48x10 vertical tubular.

1 42x7 vertical tubular.

HORIZONTAL TUBULAR BOILERS.

4 66x18.

2 60x18.

1 72x14.

3 60x16, domeless, high pressure.

2 60x14.

4 54x16.

3 54x15, domeless.

1 54x14.

1 54x12.

3 48x16, domeless.

3 48x14.

4 48x12.

1 48x10.

42" boilers, from 10 to 16 feet.

36" boilers, from 10 to 16 feet.

## ENGINES.

12x30 Hamilton Corliss.

30x60 Fraser & Chalmers Corliss.

22x48 Allis Corliss.

22x48 Wheelock Corliss.

16x42 Allis Corliss.

16x38 left-hand Corliss.

15x30 Buckeye.

15 1/2x15 Armstrong & Sims.

14x15 Armstrong & Sims.

14x20 Rice.

16x24 Atlas.

12x12 New York Safety.

14x13 Armstrong & Sims.

10 1/2x12 Armstrong & Sims.

9 1/2x12 Armstrong & Sims.

16x16 Hendy.

16x16 Rice.

7 1/2x10 Hendy.

14x24x14 Westinghouse.

13x30x16 Westinghouse.

13x22x13 Westinghouse.

11x19x11 Westinghouse.

1 90 H. P. Otto gas engine.

1 50 H. P. Lambert gas.

1 50 H. P. Lewis gas.

## ROCK DRILLS.

1 1 1/2" Bullock Monarch drill, fitted for air or steam.

4 2" Bullock Monarch drills, fitted for air or steam.

2 2 1/2" Bullock Monarch drills, fitted for air or steam.

4 3 1/2" Bullock Monarch drills, fitted for air or steam.

1 U-A Sullivan for air.

2 U-C Sullivan for steam.

3 U-E Sullivan for steam.

1 U-E No. 2 Sullivan for steam.

7 2 1/2" Rand "Little Giant."

3 3" Rand "Little Giant."

2 3 1/2" Rand "Little Giant."

1 2 1/2" Ingersoll for steam.

3 3 1/2" Ingersoll for steam.

3 3 1/2" Ingersoll for steam.

3 3 1/2" Ingersoll for steam.

1 Bullock Champion diamond prospecting core drill, with complete outfit, boiler and pump.

1 Sullivan "M" diamond prospecting core drill, with complete outfit, boiler and pump.

1 Sullivan "E" diamond prospecting core drill, with complete outfit, bit set with eight (8) pieces of carbon.

## MISCELLANEOUS MACHINERY.

1 No. 9 Sturtevant blower.

1 No. 7 Sturtevant blower.

1 No. 6 Sturtevant pressure blower.

1 No. 5 Buffalo pressure blower.

1 20x8 6-head turret lathe, hollow spindle.

4 250 H. P. separators and purifiers.

5 6x8 double-drum double-cylinder hoisting engines and boilers.

7 6 1/2x8 double-drum double-cylinder hoisting engines and boilers.

1 10x12 double-cylinder single-drum Lidgerwood, without boiler.

1 15 H. P. combined hoisting engine and boiler.

Foot-power lathes, all sizes. Machine tools of every description. Woodworking machinery.

24x12x24 steam-driven straight-line compressor.

20x24x24 National compressor.

12x12 Snyder-Hughes belt-driven compressor.

6x6x10 vertical compressor.

7x8x8 duplex vertical compressor.

1 7x7 Clayton.

1 screw punch, hand-power.

1 power milling machine.

1 Universal gear-cutter.

1 Universal keyseating machine.

3 Baker blowers, 15" inlet, 15" outlet.

1 Root blower, 10" inlet, 10" outlet.

1 hand-power hoisting sidewalk elevator.

1 24" Lafell wheel.

**FOR SALE.**

We own a choice lot of  
**RELAYING**  
**25 lb. and 30 lb. STEEL RAILS**  
and Splice Bars and Spikes for same. Also a number of Frogs, and Stub and Split  
**SWITCHES.**  
If you want to buy either new or re-laying Rails—any weight, or Switches, write us.  
**ROBINSON & ORR,**  
419 Wood Street. Pittsburgh, Pa.

**FOR SALE.**

**Rollers.**  
Two 70 H. P. Hor. Return Tubular. Two 65 H. P. Locomotive. One 25 H. P. Locomotive. One 25 H. P. Vertical. One 20 H. P. Vertical. One 10 H. P. Vertical.  
**Engines.**  
One 7x8 Vertical. One 10x12 Horizontal. One 12x24 Horizontal. One 12x24 Horizontal. One 18x24 Horizontal. One 10x14 "Buckeye" Automatic. One 13x15 "Ida" Automatic. One 15x18 "Ida" Automatic. Two 10x12 "Ball" Automatic.  
Also a lot of Pumps, Hoisting Engines, Motors, Rails, Pipe, Wood Working Machinery, Shafting, Hangers, Wood and Iron Pulleys.  
ALL AT BARGAINS.  
**Huntington Machinery & Supply Co.**  
WILKES-BARRE, PA.

**Wood-Working Machinery.**

Band Saw, 30", J. A. Fay.  
Band Re-Saw, 42x3, Williamsport.  
Fan, double, fine condition, 36".  
Jig Saw, nearly new, Rogers.  
Jointer, Buss automatic, 6' 6".  
Jointer, Smith, 12", slotted head.  
Lathes, Egan Back Knife Lathe, 54"x2 1/2".  
Lathes, Wood, 10 to 20".  
Matchers, Tompkins, 24", 3 sided.  
Moulders, 7", 4 sided, Rowley & Hermance.  
Planer, Buss, 30x6.  
Railway cut-off Saw, J. A. Fay.  
Re-saw, circular, 42", Segment Egan, fine condition.  
Sander, 24", invincible.  
Saw arbors and saw tables.  
Swing saws, new, \$35.00.  
Tenoner, D. E. D. H. & C. C. B. Rogers.  
Tenoner, Buss double end, 9", stock.  
Chain hoist, one or two ton.  
Leather belting.  
Gasoline engines, all sizes.  
42" 3-drum Columbia sander.

**PRICE MACHINERY CO.**

507 Great Northern Bldg.  
CHICAGO, ILL.

We have just secured several large manufacturing plants and we wish to dispose of the contents which are principally

**Boilers, Engines, Lathes, Planers, Milling Machines, Shapers, Screw Machines, Drill Presses, Slab Millers, Open-Side Planers and Machine Tools in General.**

Send for list and get prices.

**Girard Machine & Tool Co.**

491 N. 3d Street, PHILADELPHIA, PA.

**FOR SALE.****Five Blowing Engines.**

36" Steam Cylinder, 84" Air Cylinder, 54" Stroke.  
Engines were built by Cuyahoga Engine Works and can be seen in operation at our plant at Columbus, Ohio. Can be delivered about Nov. 1st.

**The Columbus Iron & Steel Co.**

COLUMBUS, OHIO.

**FOR SALE.**

We have over 300 assorted size Machine Tools of every description.  
Send us your wants.

**Girard Machine & Tool Co.**

491 N. Third Street, PHILADELPHIA, PA.

**FOR SALE. BRIDGES.**

1 50 ft. steel plate girder bridge, double track.  
1 500 ft., 4 spans 125 ft. each, riveted pier bridge, double track, 24 ft. wide.  
Viaduct joining pier 570 ft. double track.

**CARS.**

73 80,000 lb. hopper bottom ore cars.  
100 tons 80-lb. Relaying Steel Rails.

**HENRY A. HITNER'S SONS,**

Aramingo Ave. and Huntingdon St.

PHILADELPHIA, PA.

**FLOUR MILL MACHINERY.**

**ROLLER MILLS—Double Stands.**  
One 6x12, three 6x18, three 9x18 Case.  
One 9x24, one 9x14 Allis.  
One 9x24 and one 9x30 Todds & Stanley.

**IRON FRAME VERTICAL FRENCH BUHR MILLS.**

Two 30" Harrison, two 30" Sprout, Waldron, Three 18" Richmond, one 14" Sprout, Waldron.

**WOOD FRAME HORIZONTALS.**

One 22" Bradford, and one each, 18", 24", 30" and 36" Straub.  
Stock constantly changing. Write for what you want.

**STRAUB MACHINERY CO.,**  
Cincinnati, Ohio.

We have **FOR SALE** at

**CROWN POINT, N.Y.**

1 Smoke Stack, 8' diameter, 130' high, self supporting.  
3 Hartman Stoves, complete, 66"x16".  
3 Hartman Stoves, complete, 46"x15".  
1 9"x15" Farrell Stone Crusher.  
16 Cylinder Boilers, 36"x41".  
Air Tanks and Receivers from blowing engine.

**HENRY A. HITNER'S SONS,**

Huntingdon St. and Aramingo Ave., Philadelphia.

**FOR SALE.**

One Lodge & Shipley lathe, 18 in x10 ft. 0 in. 6 months old; used about 4 days.  
One No. 11 Union Drop Forge Company's oil furnace, new. Address

**CHESAPEAKE IRON WORKS,**

BALTIMORE, MD.

Portable Quarters for Contractors and Railroad Workmen.  
We can furnish immediate shipment of 36" gauge Box Cars in elegant condition, at prices competitive to building huts for workmen. Sanitary advantages innumerable. Such houses could be moved at completion of each contract to new field of operation. Free transportation furnished interested parties for inspection of these cars from Chicago. Have also Caboose, Refrigerator, Stock and Flat Cars.

**Walter A. Zelnicker Supply Co.,** in St. Louis, Branches—Chicago, New Orleans, Mobile, Houston and Seattle.

**FOR SALE.**—Engines—14-horse Russell traction, \$500. Twelve horse traction \$300. Thirty horse portable boiler, \$200. Fire engine, Cole Bros. make, practically new, \$500. Stationary, portable, tubular, vertical, boilers and engines all sizes. Ten horse boiler and engine on wheels, \$125. Thirty-five horse new Scotch boiler, \$200. New 20 horse engine, \$150. Slide valve engines, forty, fifty and eighty horse power. One 48" Steadman disintegrator \$250. One 3" Air Compressor, \$35. Four sawmills, 30" drill press, back geared. One hundred different machines consisting of boilers, engines, lathes, drills, heaters, pumps, at one-third their actual value.  
D. L. CASEY MACHINE CO., Springfield, Ohio.

**FOR SALE.****Drain or Culvert Pipe.**

125 lengths of 30" cast iron pipe, practically as good as new, at Charleston, S. C.

**Frank Samuel,**

Harrison Building, PHILADELPHIA, PA.

**WANTED.**—To sell Tobacco Re-drying Machinery, Truck System, complete and almost new. Special bargain for next thirty days.  
W. F. STACKHOUSE, Secretary, Marion, S. C.

**THORNHILL WAGON CO.,**

At Lynchburg, Va., have for sale a 35 horse power Engine, in good condition, second hand. Will sell cheap.

**FOR SALE.**

1 1/2-yard Marion Shovel, New York delivery, \$3000.  
Two (2) complete Contractors' Plants, Steam Shovels, Locomotives and Dump Cars, Pennsylvania delivery. Ready for immediate delivery.

Write or wire

**Jno. T. Driscoll & Co.**

13 McCormick Block, CHICAGO, ILL.

**FOR SALE.**

**Five new Vertical Boilers.**  
**One second-hand H. R. T. Boiler, 72"x16", 130 lbs. pressure.**  
**Two Locomotive Boilers, 175 H. P.**  
**One 12-ton Kelly Road Roller.**  
**One 15-ton Kelly Road Roller.**

**J. C. SAXTON,**

18 Broadway, New York City, N. Y.

**SECOND-HAND Locomotives****64 TON BALDWIN STANDARD GAUGE WITH TENDER.**

Cylinders 15x24".  
2 drivers on each side 60" diam.  
Tires 1 1/2" thick.  
Wheel base, 7' 6".  
1 set 4 wheel trucks under front end.  
No brake.

**40 TON BIG FOUR STANDARD GAUGE WITH TENDER.**

Cylinders 14x22".  
2 drivers on each side 47" diam.  
Tires 1 1/2" thick.  
Wheel base 7'.  
Steam brake.

**35 TON BROOKS MOGUL STANDARD GAUGE WITH TENDER.**

3 drivers on each side 41" diameter.  
Tires 2 1/2" thick.  
Cylinders 13/16x18".  
Air Brakes.

**6 TON RYAN & McDONALD 30" GAUGE SADDLE TANK.**

Cylinders 7 1/2x10".  
2 drivers on each side 24" diam.  
Wheel base 54".

Engines, Boilers, Pumps, Wood Working Machinery and Machine Tools of every description.

Send for complete Stock List.

**WICKES BROTHERS,**

—OFFICES—

808 Frick Building, Pittsburg, Pa.

ALSO

New York City. Chicago, Ill. Saginaw, Mich.

**FOR SALE—RELAYING RAILS.**

1000 tons 40-lb. Steel Relaying Rails and Splices.  
1500 tons 58-lb. Steel Relaying Rails and Splices.  
1000 tons 60-lb. Steel Relaying Rails and Splices.  
500 tons 63-lb. Steel Relaying Rails and Splices.  
For Prompt Shipment.

**Continental Iron & Steel Co.**

25 Broad St., New York.

**BOWEN & STREET EQUIPT. CO.**  
NORFOLK, VA.  
has Removed its offices to 301-307 New Atlantic Bldg., because of increased business and consequent necessity for more office room.

**Locomotives and Cars for Sale.**

One 14-ton Baldwin, rear tank, standard gauge.  
Three 20-ton American type Baldwins, air brakes, 36" gauge.  
One 25-ton Heisler geared, 36" gauge.  
Five Climax logging cars, 36" gauge.  
Steam shovels, hoisting engines, etc.

**THE EDGAR S. LOW CO.**

Empire Building, PITTSBURGH, PA.

**Attractive Lot of . . .****SECOND-HAND Flour and Corn Meal Machinery****FOR SALE.**

One 28-inch Little Giant single scroll wheel, left-hand, nearly new.  
One 30-inch Munson portable under-runner mill, geared drive, right-hand, old stock French buhr stones, good condition.  
One 24-inch Cogswell mill, shake feed, mill in first-class condition, latest style.  
One round reel, 8 feet by 28 inches.  
One No. 1 Eureka scourer, upright.  
One No. 2 Holt dustless purifier.  
One pair 4 feet 4 inch upper-runner buhrs, left-hand, runner has 2 1/2-inch wear to wide band, bed stone 1 1/2-inch wear, good condition, old stock.  
One pair 54-inch upper-runner buhrs, old stock, right-hand, runner has 3-inch wear to wide band; bed stone 2 1/2-inch wear, close stock, good condition.  
One 54-inch runner stone, left hand, 5-inch wear to wide band, new stock blocks, close stock, good condition.  
One pair 48-inch upper-runner buhrs, right-hand, medium close stock, runner has 3-inch wear to wide band, bed stone 3 1/2-inch wear, good condition.  
One pair 4-foot upper-runner buhrs, left-hand, open stock, runner has 2 1/2-inch wear to wide band, bed stone, 2-inch wear, fair condition.  
One 4-foot runner stone, good condition, close stock, 2 1/2-inch wear to wide band, right-hand.  
One medium open stock, runner has 1 1/2-inch wear to wide band; bedstone 1 1/2-inch wear, fair condition.  
One pair 3-foot 6-inch upper-runner buhrs, close stock, good condition, first-class stones, with hangings complete, including spindle 5 feet 11 inches long over all.

**MUNSON BROS. CO.**

UTICA, N. Y.

**Highest prices paid for Dynamos, Motors and Electrical Apparatus of any description.**

Complete Stations purchased.

Write us for full descriptions and get our cash offers.

**J. W. KOHN & CO.**

14 Merwin St., Cleveland, O.

**FOR SALE.****Five American Type Standard Gauge LOCOMOTIVES.**

IN EXCELLENT CONDITION.

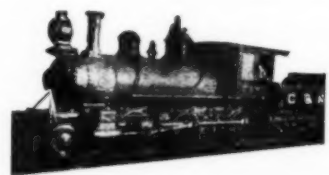
2 17"x24" Taunton Make.  
2 16"x22" Baldwin Make.  
1 17"x22" Mason Make.

We are offering these locomotives at a very low figure being desirous of moving them quickly. If you are in the market for equipment of this kind we would be pleased to have you write us for specifications and photographs.  
Correspondence solicited.

**CAINE & PLITT,**

1406 Real Estate Trust Building,  
PHILADELPHIA, PENNA.

Long Distance Phone.

**BOWEN & STREET EQUIPT. CO.**

HAVE FOR SALE

**30 STANDARD AND NARROW GAUGE LOCOMOTIVES**

for contractors' plant, lumber and mining railways, and over 200 flat, box and logging cars, coaches and large quantities of new and second-hand rail; also Steam Skidders; low rates to all points south.

OFFICE: 301-307 NEW ATLANTIC BLDG., NORFOLK, VA.  
SHOPS AT Suffolk, Va.

**CONTRACTORS' MATERIAL, FOR SALE OR RENT.**

One Marion style "A" shovel with 1 1/2 yd. dipper.  
One traction shovel, built in March, 1903, with 1 1/2 yd. dipper, No. 594.  
One Byers geared 36" gauge locomotive, weight about 7 tons.  
One 10x12 standard gauge Baldwin dummy type locomotive.  
One 7x12, 42" gauged, also 8x16, and other gauges.  
Two traction engines, 18 H. P. each.  
One traction engine, 12 H. P.  
11 wheel scrapers No. 1, 4 No. 3.  
5 Austin dump wagons, 1 1/2 yd., iron axle.  
150 picks, 150 shovels, Kirk battery, chains, tool boxes, etc.; 12 36" gauge dump cars; 25 42" gauge dump cars; 25 30" gauged flat cars.  
Also a lot of other material too numerous to mention. Correspondence solicited.

**HARPER MACHINERY CO.**

Main Office, Park Row Bldg., New York.  
Yards & Shops, Newark, N. J.





**MANUFACTURERS**  
**Light Steel Rails**  
 16-20-25-30-35 and 40 lbs. per yard.  
 Prompt shipment on all orders.  
**SCHONTHAL IRON & STEEL CO.**  
 Mills and General Offices,  
**CUMBERLAND, MD.**

### FOR SALE.

**34" Gauge Equipment.**  
 3 Locomotives, Mogul Type, in good condition, one 12"x16" Cylinder and two 13"x18" Builder, H. K. Porter. A lot of Box Cars. All for delivery in June or July.  
 3 Passenger Coaches.  
 1 Combination Baggage and Passenger Coach. Immediate Delivery.  
**Standard Gauge.**  
 We also offer, for immediate delivery, second-hand standard gauge Locomotives from 13" to 18" cylinders, American and 10-Wheel Type. Relaying Rails.  
**SAVANNAH LOCOMOTIVE WORKS & SUPPLY COMPANY,**  
 Savannah, Ga.

### For Sale—Rails and Locomotives.

One 20x24 Baldwin consolidation.  
 One 19x24 American type.  
 Two 15x24 American type.  
 One 18x24 Mogul.  
 One 16x24 Mogul.  
 Three 17x22 six-wheel switchers.  
 Five 12x14 Forney type.  
 One 12x16 Forney type.  
 One 9x14 four-wheel.  
 One 12x22 four-wheel saddle tank.  
 One 12x18 four-wheel, with front truck, trailing tender. All standard gauge.  
**In 3-ft. gauge Locomotives we have:**  
 One 12x18 Forney type.  
 One 9x14 six-wheel saddle tank, with fuel tender.  
 One 7x12 four-wheel saddle tank.  
 One 8x16 four-wheel saddle tank.  
 Also new and relaying rails of all weights. Write us for prices and terms.  
**BIRMINGHAM RAIL & LOCOMOTIVE CO.,** Birmingham, Ala.

### N. Y. Elevated R. R. LOCOMOTIVES

Ready for Immediate Delivery.  
 Excellent Condition.  
 4' 8 1/2" Gauge, Forney Type, Cylinders 11"x14", 11"x16", 12"x16".  
 Suitable for Logging Roads, Contractors, Switching, &c.  
**BENJAMIN WATSON,**  
 (Coffee Exchange Bldg.)  
 66 to 70 Beaver Street, N. Y. CITY.  
 Steel Rails, Cars, Locomotives, R. R. Supplies.

### R. S. ARMSTRONG & BRO.

**ATLANTA, GA.**  
**IRON BROKERS,**  
 And dealers in New and Second-hand Machinery. Also carry in stock Hoisting Outfits and Light Section Rail for contractors' use.

### FOR SALE.

Four (4) 18"x22" Cylinder Baldwin, ten-wheel Freight Standard Gauge Locomotives, weight about 42 tons; six drivers, 50" diameter; separate eight-wheel tender.  
 One (1) 14"x22" Cylinder, Baldwin six-wheel Locomotive (four drivers 50" diameter, pony truck in front, with separate eight-wheel tender.  
 Twenty (20) Flat Cars, 30' long, 20 tons, capacity, Diamond Trucks, M. C. B. Automatic Couplers, hand brakes.  
 Twelve (12) Coaches, 51' over all; carry 54 passengers; good coaches; cheap.  
 Two (2) Baggage Cars, same length; carry 28 passengers; all equipped with Westinghouse Air Brakes.

**NEW YORK EQUIPMENT COMPANY,**  
 18 Broadway (Room 526), New York.



**SOLE MANUFACTURERS OF FRED G. WEIR'S**  
 IMPROVED RIGID & SPRING FROGS (CROSSING) SINGLE & THREE THROW SPLIT SWITCHES. FIXED & AUTOMATIC SWITCH STANDS. STEEL DIE FORMED RAIL BRACES. SWITCH FIXTURES, ETC.

**CABLE & ELECTRIC TRACK WORK**  
 FROGS, SWITCHES, CROSSINGS, CURVES, RAIL CHAIRS, ETC.

### FOR SALE.

## New Light Steel Rails,

ALL WEIGHTS,  
 WITH  
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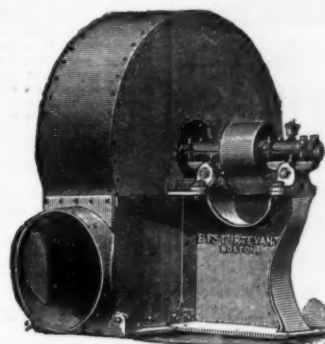
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9 Box Cars, 54 ft. long, 60,000 lbs. capacity. 1 200 H. P. Hamilton Corliss Engine. 400 tons 56 lb. and 60 lb. steel re-layers with splices. 350 ton 67 lb. steel re-layers and splices. 300 tons 30 lb. steel re-layers and splices, for South Carolina delivery. Also New Rails, 8 lbs. to 40 lbs.

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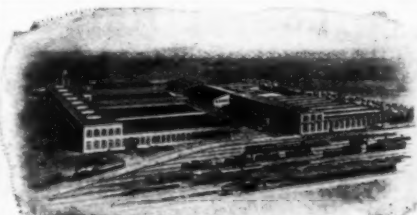
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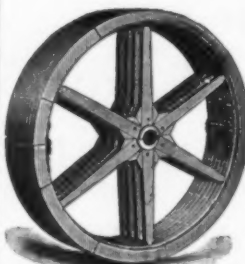
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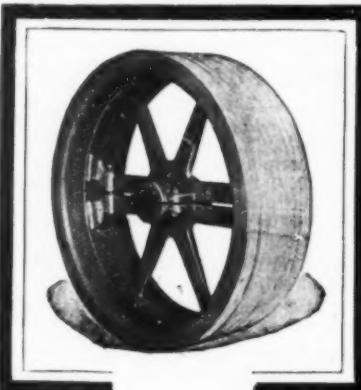
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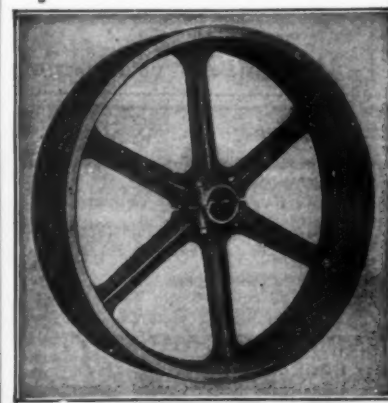
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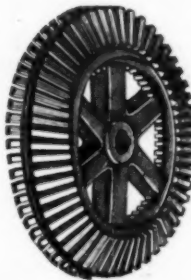
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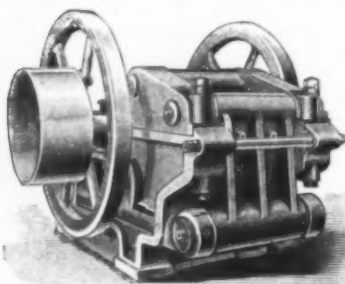


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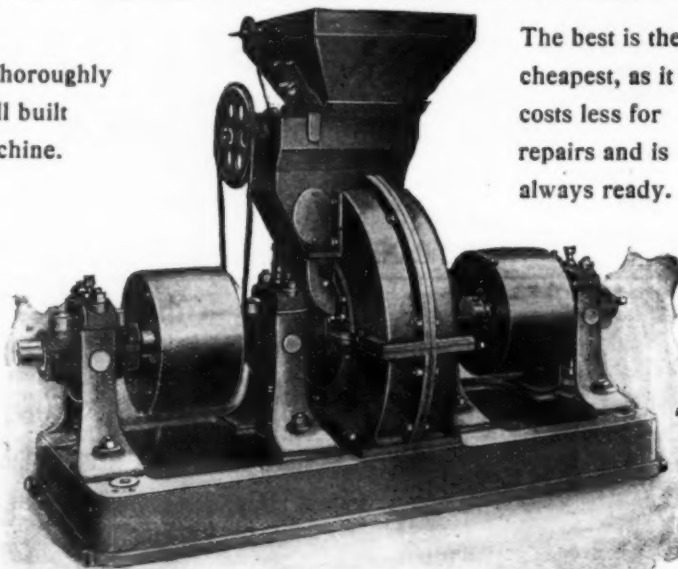
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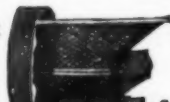
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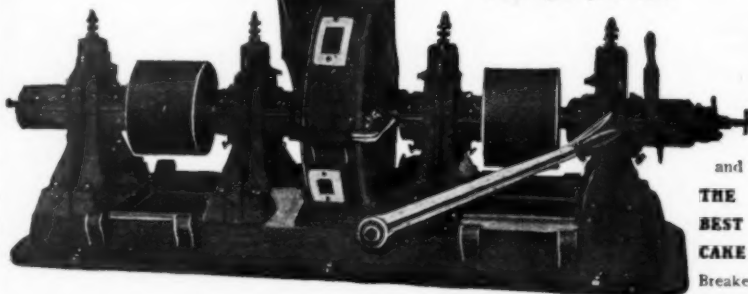
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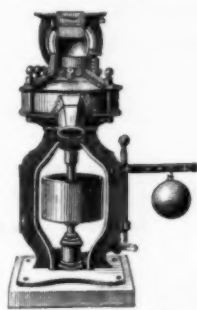
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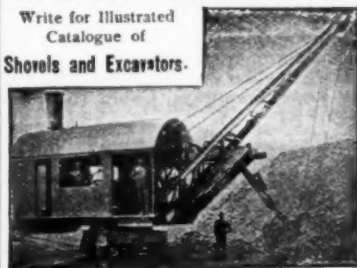
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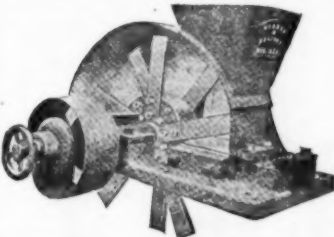
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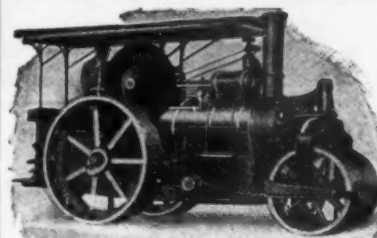
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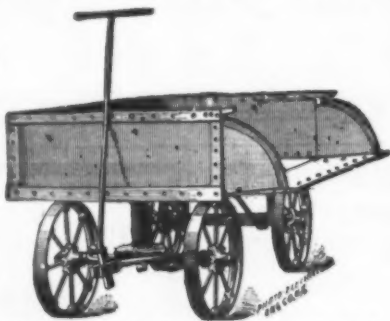
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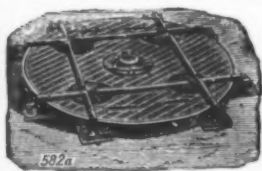
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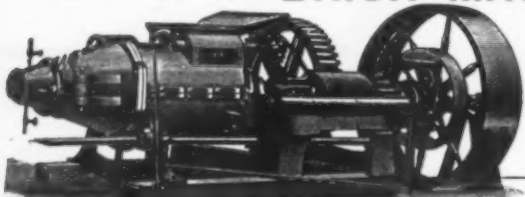
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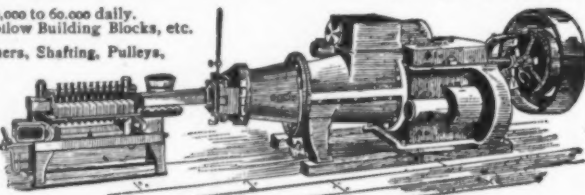
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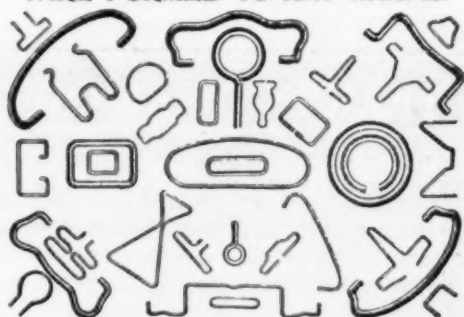
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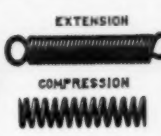
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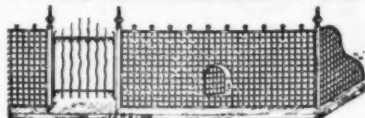
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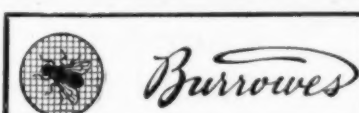
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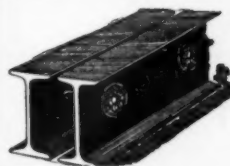
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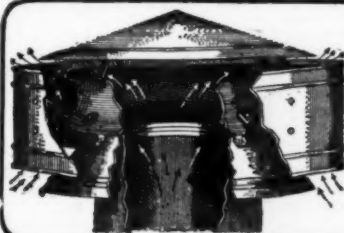
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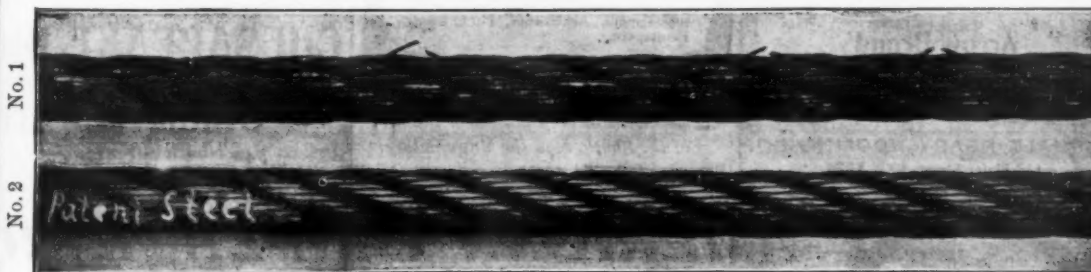
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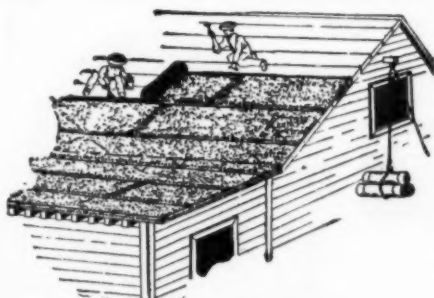
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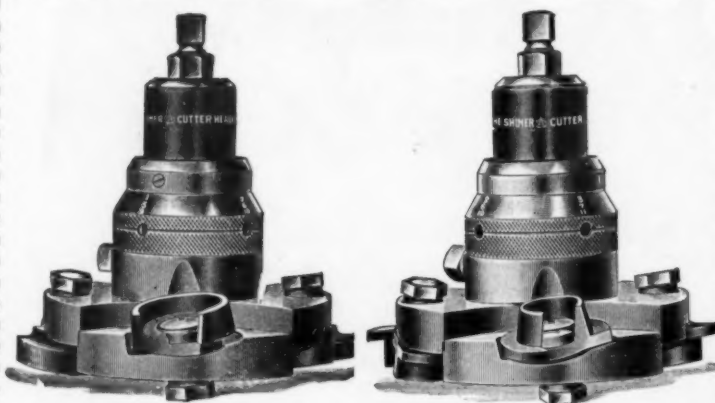
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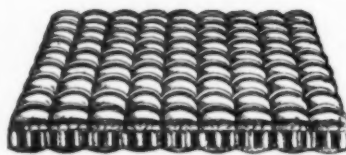
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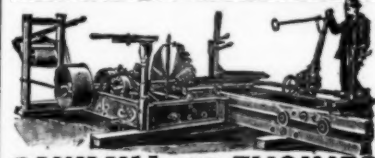
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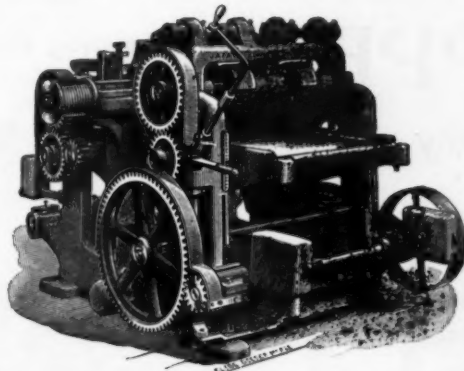


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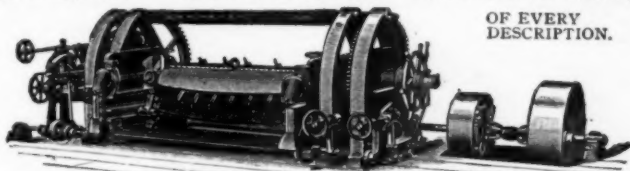
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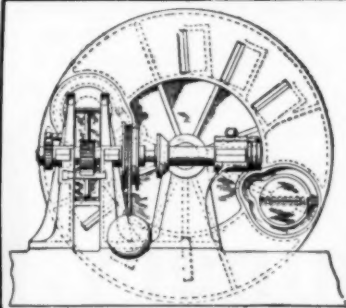


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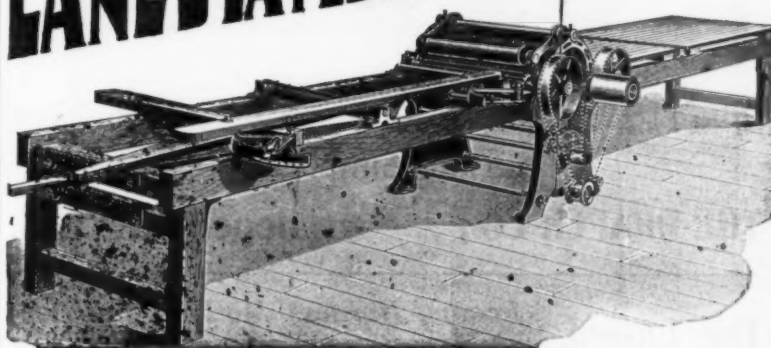
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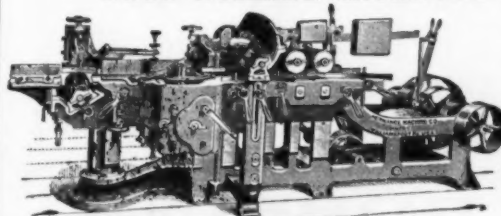
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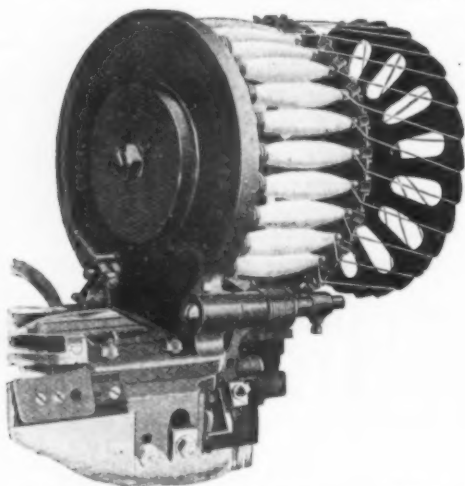
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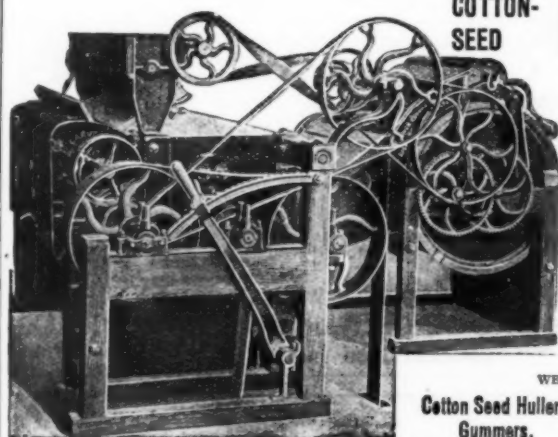
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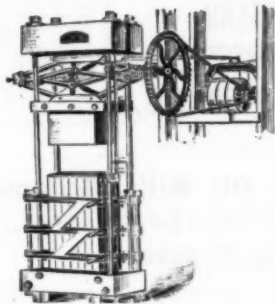
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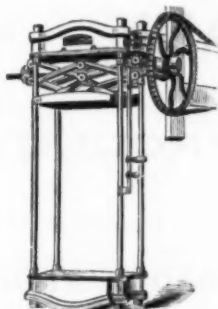
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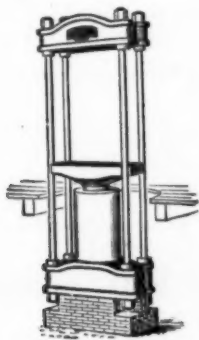
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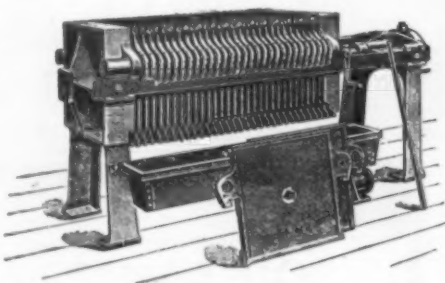
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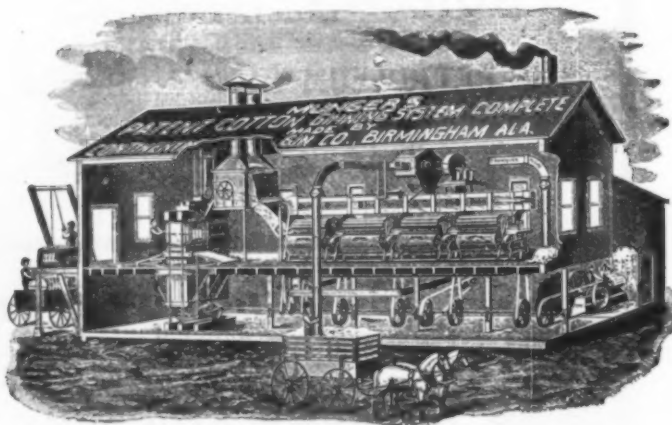
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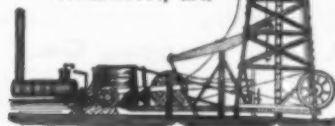
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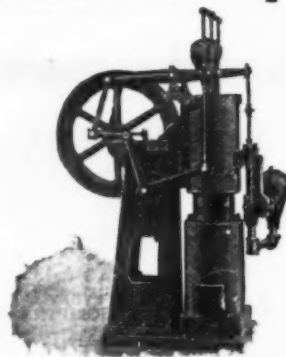
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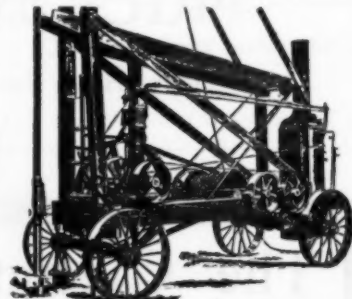
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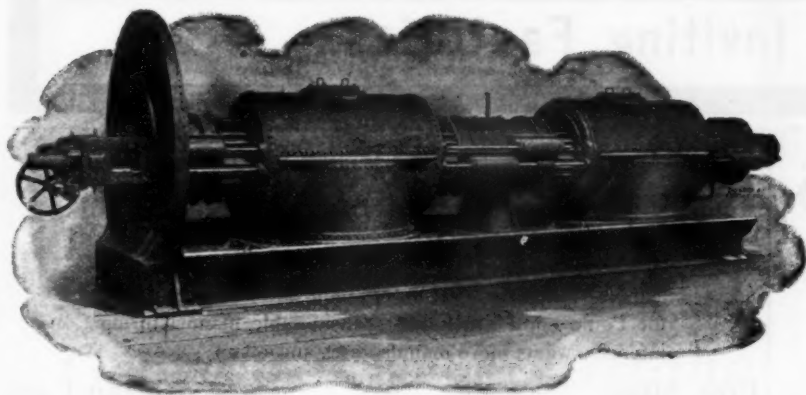
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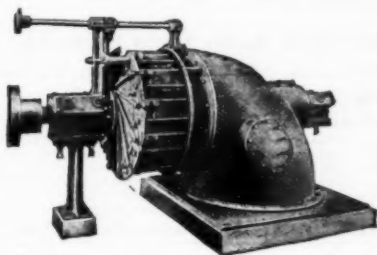
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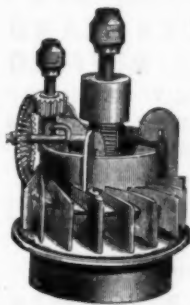


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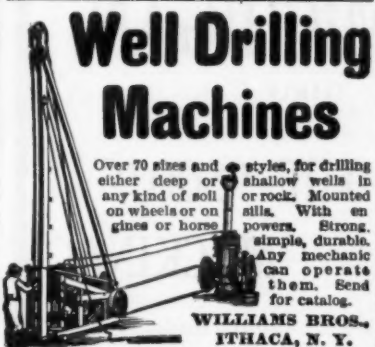


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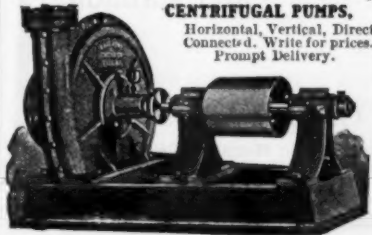
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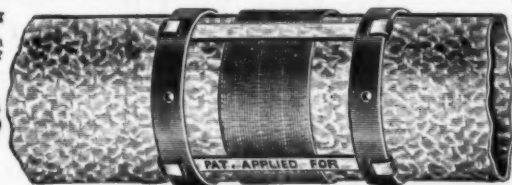
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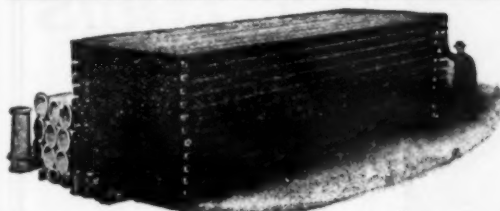
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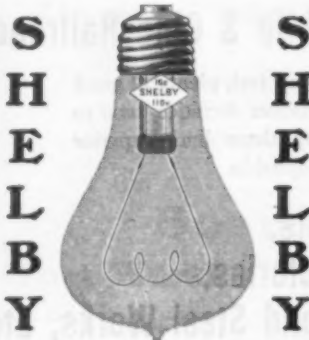
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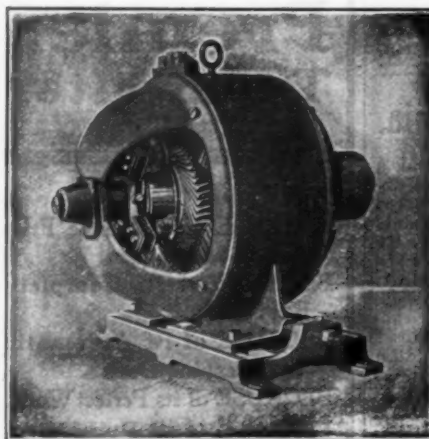
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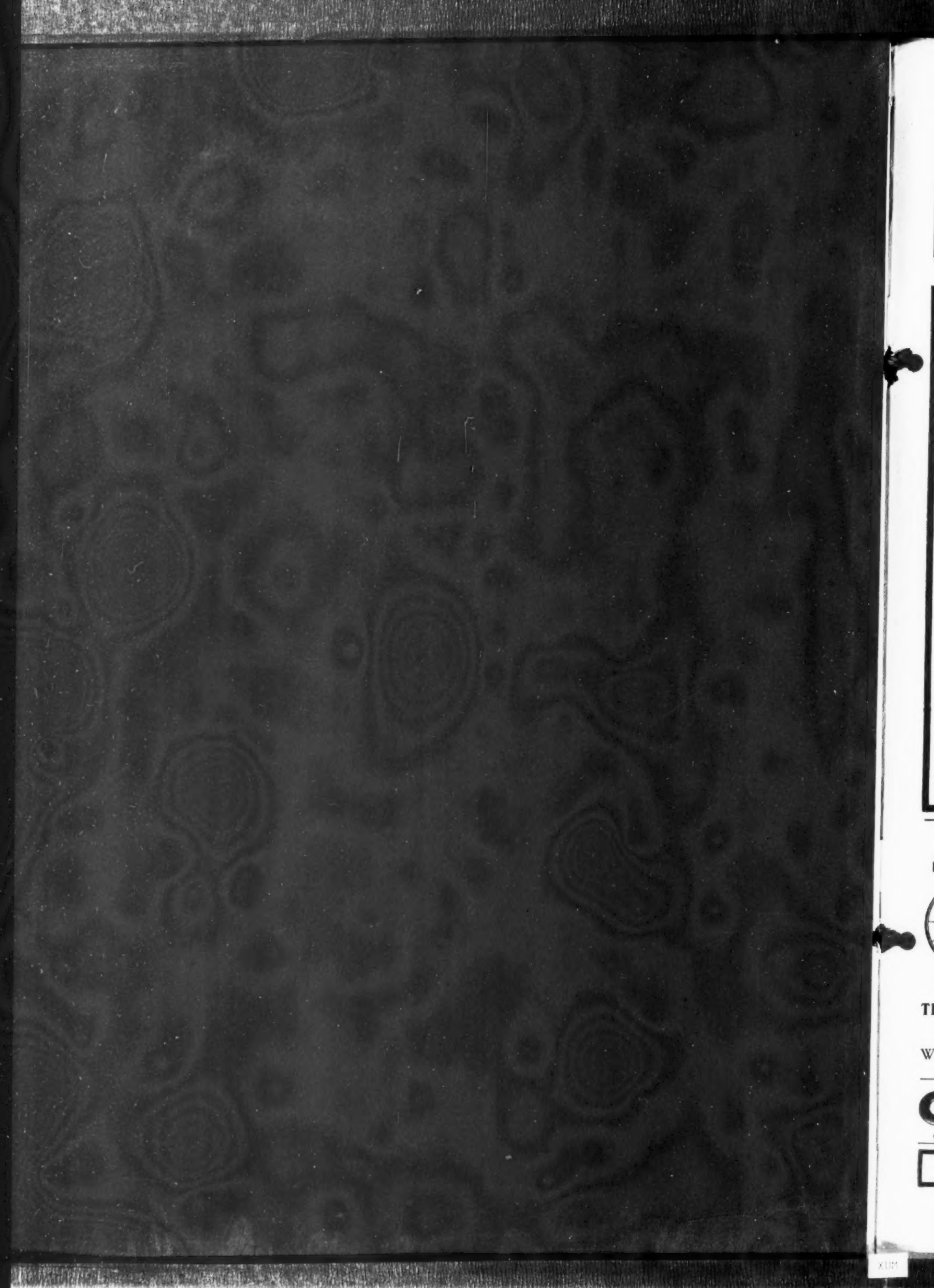
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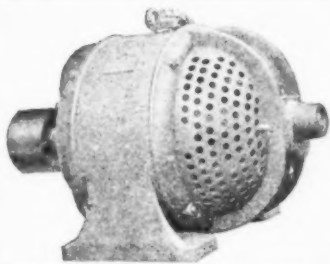
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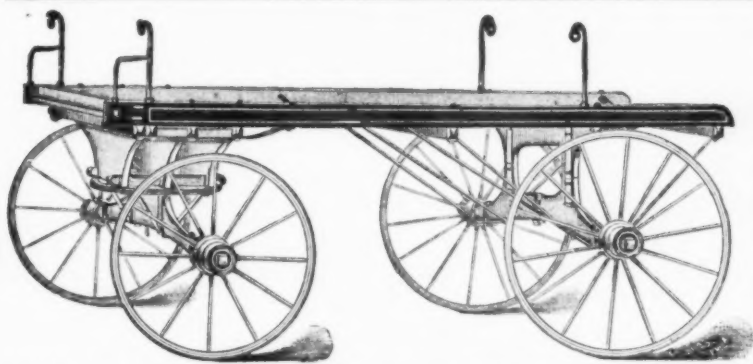
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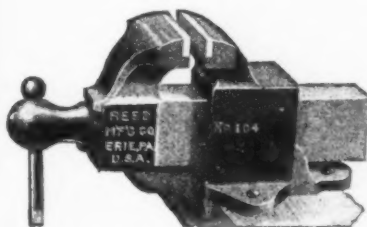
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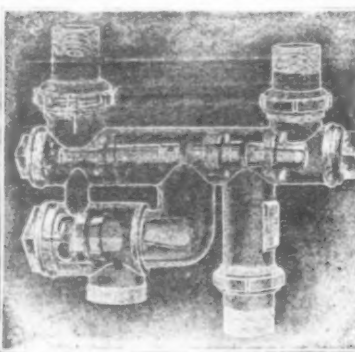
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